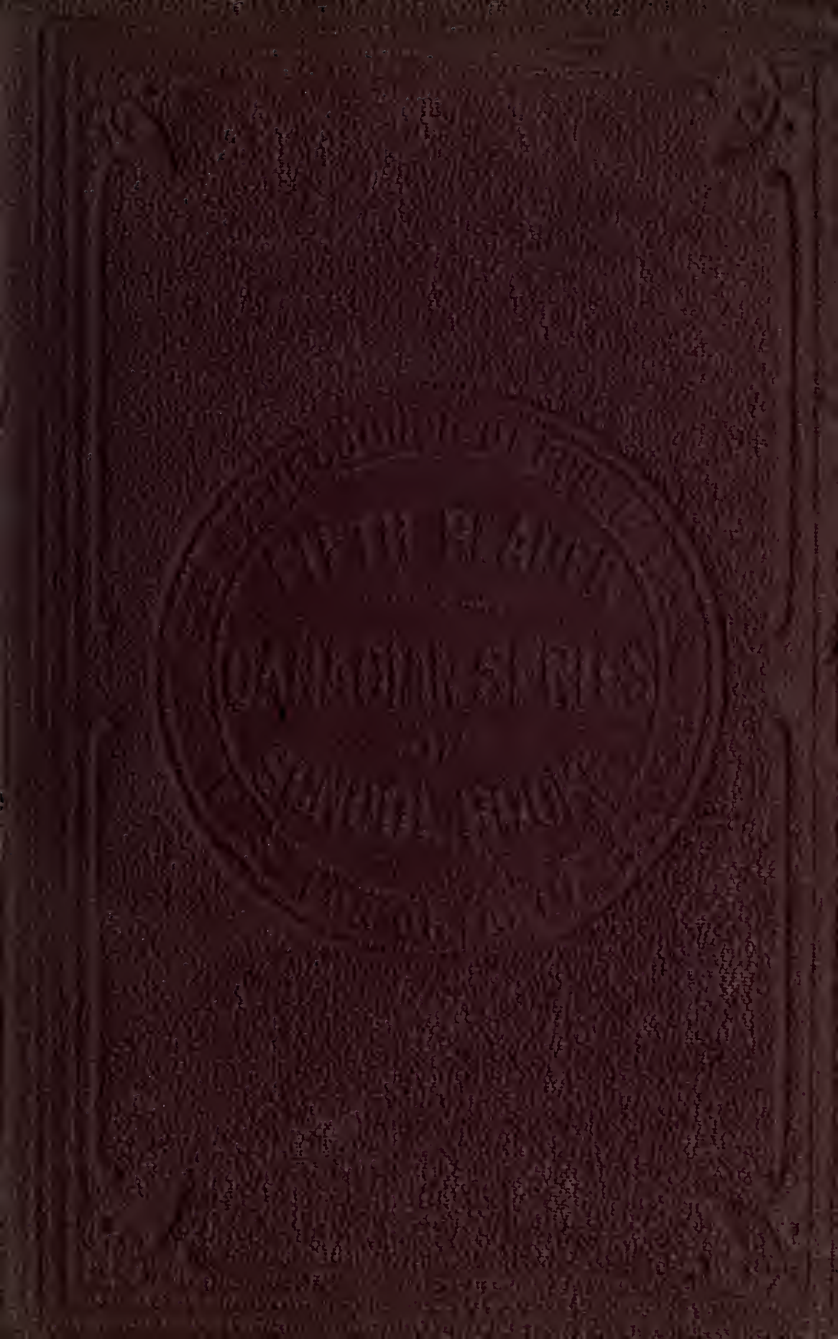

Hannie A. Carryer

Sept. 1868

Canadian Series of School Books.

THE

FIFTH BOOK

OF

READING LESSONS.

Authorized
By the Council of Public Instruction
For Ontario.

Wm. WARWICK,
BOOKSELLER, STATIONER, BOOKBINDER,
AND DEALER IN FANCY GOODS,
(*Opposite the Market,*) WOODSTOCK, ONT.

Entered according to Act of the Provincial Legislature in the Year One Thousand Eight Hundred and Sixty-seven, by the Rev. EGERTON RYERSON, LL.D., *Chief Superintendent of Education for Ontario, in the Office of the Registrar of the Province of Canada.*

PREFACE.

The chief object regarded in the preparation of this volume, the Fifth Book of the Series, has been to supply the pupils of the Public Schools with such specimens of the best English authors as are examples of correct style and pure taste, and are suitable for use as Exercises in Reading or Elocution. At the same time, in the selection of the extracts, attention was given both to the extent and character of the information that they supplied, and to the influence which they might exert on the young scholar in engaging his interest, stimulating his desire for knowledge, and forming his character. The subjects embraced in the volume comprehend not merely Literature, Art and Industry, but also the Sciences; not that it is intended to teach any of them by a summary, but that such readings seemed essential to the completeness of the book with a view to the purposes for which it is designed. A classified arrangement of the pieces has not been adopted, as it appeared more desirable to have, at least generally, a variety of subjects in consecutive extracts. An Index, however, is subjoined, by means of which the book may be systematically read according to departments or branches of knowledge.

For notices of the authors, directions for pronunciation, and explanations of different phrases or words, the reader is referred to "The Companion to the Reading Books," in which he will find the necessary aid. The signification and derivation of many scientific terms are embodied in the articles themselves, and a useful addition has been made to the Historical and Biographical extracts by the statement of the dates. Of the list of authors represented in the volume, it is sufficient to say that it contains the names of many of the most distinguished writers on both sides of the Atlantic.

EDUCATION OFFICE,
TORONTO, *December* 1867.

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FIFTH BOOK OF READING LESSONS.

HIEROGLYPHICS, REPRESENTING "DEATH AND THE DESCENT OF THE SOUL."
(*From an ancient M.S. on papyrus found at Thebes.*)

EGYPT.

At the earliest period to which civil history reaches back, Egypt was inhabited by a highly civilized agricultural people, under a settled monarchical government, divided into castes, the highest of which was composed of the priests, who were the ministers of a religion based on a pantheistic worship of nature, and having for its sacred symbols not only images, but also living animals, and even plants. The priests were also in possession of all the literature and science of the country, and all the employments based upon such knowledge. The other castes were, 2nd, the

soldiers; 3rd, the husbandmen; 4th, the artificers and tradesmen; and last, held in great contempt, the shepherds or herdsmen, poulterers, fishermen, and servants. The Egyptians possessed a written language, which appears to have had affinities with both the great families of language—the Semitic and the Indo-European; and the priestly caste, moreover, the exclusive knowledge of a sacred system of writing, the characters of which are known by the name of *hieroglyphics*, in contradistinction to which the common characters are called *enchorial*, (i.e., *of the country*.) They were acquainted with all the processes of manufacture which are essential to a highly-civilized community. They had made great advances in the fine arts, especially architecture and sculpture, (for in painting, their progress was impeded by a want of knowledge of perspective.) They were deterred from commercial enterprise by the policy of the priests, but they obtained foreign productions to a great extent chiefly through the Phœnicians, and at a later period they engaged in maritime expeditions. In science they do not seem to have advanced so far as some have thought; but their religion led them to cultivate astronomy and its application to chronology, and the nature of their country made a knowledge of geometry indispensable, and their application of its principles to architecture is attested by their extant edifices. There can be little doubt that the origin of this remarkable people, and of their early civilization, is to be traced to the same Asiatic source as the early civilization of Assyria and India.

The ancient history of Egypt may be divided into four great periods:—(1.) From the earliest times to its conquest by Cambyses, during which it was ruled by a succession of native princes, into the difficulties of whose history this is not the place to inquire. The last of them, Psammenitus, was conquered and dethroned by Cambyses in B.C. 525, when Egypt became a province of the Persian empire. (2.) From the Persian conquest in B.C. 525, to the transference of their dominion to the Macedonians in B.C. 332. This period was one of almost constant struggles between the Egyptians and their conquerors until B.C. 340, when Nectanabis II., the last native ruler of Egypt, was defeated by Darius Ochus. It was during this period that the Greeks acquired a considerable knowledge of Egypt. (3.) During the dynasty of the Macedonian kings, from the accession of Ptolemy, the son of Lagus, in B.C. 323, down to B.C. 30, when Egypt became a province of the Roman empire. When Alexander invaded Egypt in B.C. 332, the country

submitted to him without a struggle; and, while he left it behind him to return to the conquest of Persia, he conferred upon it the greatest benefit that was in his power, by giving orders for the building of Alexandria. In the partition of the empire of Alexander, after his death in B.C. 323, Egypt fell to the share of Ptolemy, the son of Lagus, who assumed the title of king in B.C. 306, and founded the dynasty of the Ptolemies, under whom the country greatly flourished, and became the chief seat of Greek learning. But soon came the period of decline. Wars with the adjacent kingdom of Syria, and the vices, weaknesses, and dissensions of the royal family, wore out the state, till in B.C. 81 the Romans were called upon to interfere in the disputes for the crown, and in B.C. 55 the dynasty of the Ptolemies came to be entirely dependent on Roman protection, and, at last, after the battle of Actium, and the death of Cleopatra, who was the last of the Ptolemies, Egypt was made a Roman province, B.C. 30. (4.) Egypt under the Romans, down to its conquest by the Arabs in A.D. 638. As a Roman province, Egypt was one of the most flourishing portions of the empire. The fertility of its soil, and its position between Europe, Arabia, and India, together with the possession of such a port as Alexandria, gave it the full benefit of the two great sources of wealth, agriculture, and commerce. Learning continued to flourish at Alexandria, and a succession of teachers, such as Origen and Clement of Alexandria, conferred real lustre on the ecclesiastical annals of the country. When the Arabs made their great inroad upon the Eastern empire, the geographical position of Egypt naturally caused it to fall an immediate victim to that attack, which its wealth and the peaceful character of its inhabitants invited. It was conquered by Amrou, the lieutenant of the Caliph Omar, in A.D. 638. —SMITH.

THE MONUMENTS OF EGYPT.

THE life and history of the ancient Egyptians are known to us, not through native historians or poets, but through the works of the Greeks, through the Scriptures of the Old Testament, and more especially through the sculptured and architectural works of the people themselves; for those works, having withstood the ravages of thousands of years, and the destructive hand of man, still remain, and bear witness to the greatness of the ancient Egyptians, to their skill, their arts, and their mode of life. No nation

has ever so fully portrayed itself in all its pursuits, religious, social, and military, as the Egyptians. But Egypt, with all its wonders, was comparatively little known until the end of the last century, when a new impulse was given to the study of its history and its antiquities, by the expedition of Napoleon. The most ancient and most remarkable of these monuments are those at Thebes, in the upper valley of the Nile. The city of Thebes, the most ancient capital of Egypt, was situated on both banks of the Nile, and its site is at present occupied by several villages, from which the ruins derive their names. Travellers are inexhaustible in their admiration of the gigantic masses of ruin, of

RUINS OF THE TEMPLE OF KARNAK.

the temples, avenues of columns, obelisks, colossuses, and catacombs, in which the district abounds. The temple palace of Karnak, like some others of these vast structures, probably consisted partly of temples, and partly of residences of the Egyptian kings. This stupendous ruin is connected with another in the village of Luxor, by an avenue of colossal sphinxes, no less than six thousand feet in length—the sphinxes standing at intervals of ten feet from one another, but most of them now covered with earth. The portico of the temple of Karnak, to which the avenue of sphinxes forms the approach, is generally regarded as

the grandest specimen of Egyptian architecture. One hundred and thirty-four columns support the edifice. The twelve central ones are of gigantic dimensions, measuring thirty-four feet in circumference, and fifty-six in height, with capitals so large, that one hundred men can comfortably stand together on them. The walls of the apartments and chambers here, as in all the other temples and palaces, are decorated with statues and figures in relief, painted over with brilliant colors. All these monuments are of the greatest interest, not only because they display the state of the arts at a remote period, but because the sculptures and paintings represent historical occurrences connected with the founders of the monuments. The buildings on the western bank of the river, though not equal to those of Karnak and Luxor, are yet among the finest Egyptian monuments. We there meet with the palace and temple of Medmet-Habu, and a structure in the vicinity called the Memnonium. A plain not far from it bears the name of the "Region of the Colossuses," from the number of colossal statues with which it is covered, partly standing upright, partly overturned, and partly broken to pieces. The two largest of them are fifty-six feet high, one of these being the celebrated statue of Memnon, which was believed in ancient times to give forth a shrill sound every morning at sunrise. Not far from these colossal figures, remnants of a building are seen, which has suffered much from the destructive hand of man, and is generally believed to be the tomb of Osymandias, mentioned by Diodorus. Most of the tombs, however, are under ground, and the necropolis of Thebes, extending from Medmet-Habu for a distance of about five miles in the Libyan hills, is scarcely less remarkable than the temples and palaces of the city itself. The many subterranean chambers and passages form a real labyrinth. The walls of these chambers are likewise covered with figures in relief, and fresco paintings, in many of which the colors are still as fresh as if they were of yesterday. They represent the judgment of the dead, their history and occupations, and are therefore of great interest to the inquirer into the social and domestic customs of the ancient Egyptians. These chambers, moreover, are full of a great variety of utensils and ornaments, and rolls of papyrus, recording things connected with the history of those buried, or rather preserved as mummies, in the catacombs. The inhabitants of the village of Gurma, at the entrance of the necropolis, have for many years carried on a lucrative traffic in the articles found in the necropolis. Among the treasures thence

brought to light, we may mention some invaluable MSS. of Greek authors, with whose works we should otherwise be unacquainted.

These catacombs, destined for all classes of the people, are far surpassed in magnitude and splendor by the tombs of the kings, which are situated in a separate and dismal place, well fitted to be conceived as the abode of the dead. Many of them have been opened and ransacked. These and a hundred other remains furnish us with the means of forming some idea of the ancient magnificence of that capital of Egypt, and no historian or poet could do this more effectually or strikingly. The execution of these works required an amount of skill and taste which no one would expect at so remote a period; for it is an indubitable fact that the greatest and most important of them must have been built long before the year 1000 B.C.; and as Egyptian art was then at its highest, we must date the beginning of its cultivation some centuries earlier. —SCHMITZ.

ADDRESS TO AN EGYPTIAN MUMMY.

AND thou hast walk'd about (how strange a story!)
In Thebes's streets three thousand years ago,
When the Memnonium was in all its glory,
And time had not begun to overthrow
Those temples, palaces, and piles stupendous,
Of which the very ruins are tremendous!

Speak! for thou long enough hast acted dummy—
Thou hast a tongue, come, let us hear its tune;
Thou 'rt standing on thy legs above ground, mummy!
Revisiting the glimpses of the moon.
Not like thin ghosts or disembodied creatures
But with thy bones and flesh, and limbs and features.

Tell us—for doubtless thou canst recollect—
To whom should we assign the Sphinx's fame?
Was Cheops or Cephrenes architect
Of either pyramid that bears his name?
Is Pompey's pillar really a misnomer?
Had Thebes a hundred gates, as sung by Homer?

Perhaps thou wert a mason, and forbidden
By oath to tell the mysteries of thy trade;
Then say, what secret melody was hidden
In Memnon's statue, which at sunrise play'd?
Perhaps thou wert a priest,—if so, my struggles
Are vain, for priestcraft never owns its juggles.

Perchance that very hand, now pinion'd flat,
Has hob-a-nobb'd with Pharaoh, glass to glass :
Or dropp'd a halfpenny in Homer's hat,
Or doff'd thine own to let Queen Dido pass,
Or held, by Solomon's own invitation,
A torch at the great Temple's dedication.

I need not ask thee if that hand, when arm'd,
Has any Roman soldier maul'd and knuckled,
For thou wert dead, and buried, and embalm'd,
Ere Romulus and Remus had been suckled ;
Antiquity appears to have begun
Long after thy primeval race was run.

Thou couldst develop, if that wither'd tongue
Might tell us what those sightless orbs have seen,
How the world look'd when it was fresh and young,
And the great Deluge still had left it green ;
Or was it then so old, that history's pages
Contain'd no record of its early ages ?

Still silent ? incommunicative elf !
Art sworn to secrecy ? then keep thy vows ;
But prithee tell us something of thyself—
Reveal the secrets of thy prison-house !
Since in the world of spirits thou hast slumber'd,
What hast thou seen—what strange adventures number'd ?

Since first thy form was in this box extended,
We have, above ground, seen some strange mutations :
The Roman empire has begun and ended,
New worlds have risen—we have lost old nations,
And countless kings have into dust been humbled,
Whilst not a fragment of thy flesh has crumbled.

Didst thou not hear the pother o'er thy head,
When the great Persian conqueror, Cambyses,
March'd armies o'er thy tomb with thundering tread,
O'erthrew Osiris, Orus, Apis, Isis,
And shook the Pyramids with fear and wonder,
When the gigantic Memnon fell asunder ?

If the tomb's secrets may not be confess'd,
The nature of thy private life unfold ;
A heart has throbb'd beneath that leathern breast,
And tears adown that dusky cheek have roll'd.
Have children climb'd those knees, and kiss'd that face ?
What was thy name and station, age and race ?

Statue of flesh—immortal of the dead!
Imperishable type of evanescence!
Posthumous man, who quitt'st thy narrow bed,
And standest undecay'd within our presence,
Thou wilt hear nothing till the Judgment morning,
When the great trump shall thrill thee with its warning!

Why should this worthless tegument endure,
If its undying guest be lost for ever?
Oh, let us keep the *soul embalm'd and pure*
In living virtue; that, when both must sever,
Although corruption may our frame consume,
The immortal spirit in the skies may bloom!

—Horace Smith.

DISCOVERY OF THE ALBERT N'YANZA.

That night I hardly slept. For years I had striven to reach the "Sources of the Nile." In my nightly dreams during that arduous voyage I had always failed, but, after so much hard work and perseverance, the cup was at my very lips, and I was to *drink* at the mysterious fountain before another sun should set—at that great reservoir of nature that, ever since creation, had baffled all discovery.

I had hoped, and prayed, and striven through all kinds of difficulties—in sickness, starvation, and fatigue—to reach that hidden source; and when it had appeared impossible, we had both determined to die upon the road, rather than return defeated. Was it possible that it was so near, and that to-morrow we could say, "The work is accomplished"?

March 14th.—The sun had not risen when I was spurring my ox after the guide, who, having been promised a double handful of beads on arrival at the lake, had caught the enthusiasm of the moment. The day broke beautifully clear, and having crossed a deep valley between the hills, we toiled up the opposite slope. I hurried to the summit. The glory of our prize burst suddenly upon me! There, like a sea of quicksilver, lay, far beneath, the grand expanse of water—a boundless sea-horizon on the south and south-west—glittering in the noonday sun; and on the west, at fifty or sixty miles' distance, the blue mountains rose from the bosom of the lake to a height of about seven thousand feet above its level.

It is impossible to describe the triumph of that moment. Here was the reward for all our labor — for the years of tenacity with which we had toiled through Africa. England had won the sources of the Nile! Long before I reached this spot, I had arranged to give three cheers with all our men, in English style, in honor of the discovery; but now that I looked down upon the great inland sea, lying nestled in the very heart of Africa, and thought how vainly mankind had sought these sources throughout so many ages, and reflected that I had been the humble instrument permitted to unravel this portion of the great mystery, when so many greater than I had failed, I felt too serious to vent my feelings in vain cheers for victory, and I sincerely thanked God for having guided and supported us through all the dangers to the good end. I was about fifteen hundred feet above the lake, and as I looked down from the steep granite cliff upon those welcome waters—upon that vast reservoir which nourished Egypt, and brought fertility where all was wilderness—upon that great source so long hidden from mankind, that source of bounty and of blessings to millions of human beings, and as one of the greatest objects in nature, I determined to honor it with a great name. As an imperishable memorial of one loved and mourned by our gracious Queen, and deplored by every Englishman, I called this great lake "The Albert N'yanza." The Victoria and the Albert lakes are the two sources of the Nile.

The zigzag path to descend to the lake was so steep and

dangerous that we were forced to leave our oxen with a guide, who was to take them to Magungo and wait for our arrival. We commenced the descent of the steep pass on foot. I led the way, grasping a stout bamboo. My wife, in extreme weakness, tottered down the pass, supporting herself upon my shoulder, and stopping to rest every twenty paces. After a toilsome descent, weak with years of fever, but for the moment strengthened by success, we gained the level plain below the cliff. A walk of about a mile through flat sandy meadows of fine turf interspersed with trees and bush, brought us to the water's edge. The waves were rolling upon a white pebbly beach; I rushed into the lake, and thirsty with heat and fatigue, with a heart full of gratitude, I drank deeply from the sources of the Nile. Within a quarter of a mile of the lake was a fishing village named Vacovia, in which we now established ourselves. Everything smelt of fish, and everything looked like fishing; not the "gentle art" of England, with rod and fly; but harpoons were leaning against the huts, and lines almost as thick as the little finger were hanging up to dry, to which were attached iron hooks of a size that said much for the monsters of the Albert lake. On entering the hut I found a prodigious quantity of tackle; the lines were beautifully made of the fibre of the plantain stem, and were exceedingly elastic, and well adapted to withstand the first rush of a heavy fish; the hooks were very coarse, but well barbed, and varied in size from two to six inches. A number of harpoons and floats for hippopotami were arranged in good order, and the *tout ensemble* of the hut showed that the owner was a sportsman.

The harpoons for hippopotami were precisely the same pattern as those used by the Hamran Arabs on the Taka frontier of Abyssinia, having a narrow blade of three-quarters of an inch in width, with only one barb. The rope fitted to the harpoon was beautifully made of plantain fibre, and the float was a huge piece of ambatch-wood, about fifteen inches in diameter. They speared the hippopotamus from canoes, and those large floats were necessary to be easily distinguished in the rough waters of the lake.

My men were perfectly astounded at the appearance of the lake. The journey had been so long, and "hope deferred" had so completely sickened their hearts, that they had long since disbelieved in the existence of the lake, and they were persuaded that I was leading them to the sea. They now looked on the lake with astonishment. Two of them had already seen the sea at Alexandria, and they unhesitatingly declared that this was the sea, but that it was not salt.

—Sir S. W. Baker.

BABYLON.

Secular history ascribes the origin of Babylon to Belus, (*i.e.*, the god Baal,) and its enlargement and decoration to Ninus, or his wife Semiramis; or, according to another tradition, the country was subdued by Ninus, and the city was subsequently built by Semiramis, who made it the capital of the Assyrian empire. At all events it is pretty clear that Babylon was subject to the Assyrian kings of Nineveh from a very early period; and the time at which the governors of Babylon first succeeded in making themselves virtually independent, cannot be determined with any certainty until we know more of the history of the early Assyrian dynasties. The Babylonian empire begins with the reign of Nabopolassar, the father of Nebuchadnezzar, who, with the aid of the Median king Cyaxares, overthrew the Assyrian monarchy, and destroyed Nineveh, (B.C. 606,) and soon afterwards defended his kingdom against the aggressions of Necho, king of Egypt, in the battle of Circesium, (B.C. 604.) Under his son and successor, Nebuchadnezzar, (B.C. 604–562,) the Babylonian empire reached its height, and extended from the Euphrates to Egypt, and from the mountains of Armenia to the deserts of Arabia. After his death it again declined, until it was overthrown by the capture of Babylon by the Medes and Persians under Cyrus, (B.C. 538,) who made the city one of the capitals of the Persian empire, the others being Susa and Ecbatana. Under his successors the city rapidly sank. Darius I. dismantled its fortifications, in consequence of a revolt of its inhabitants; Xerxes carried off the golden statue of Belus, and the temple in which it stood became a ruin. After the death of Alexander, Babylon became a part of the Syrian kingdom of Seleucus Nicator, who contributed to its decline by the foundation of Seleucia on the Tigris, which soon eclipsed it. At the commencement of our era, the greater part of the city was in ruins; and at the present day all its visible remains consist of mounds of earth, ruined masses of brick walls, and a few scattered fragments. Its very site has been turned into a dreary marsh by repeated inundations from the river.

The city of Babylon had reached the summit of its magnificence in the reign of Nebuchadnezzar. It formed a square, each side of which was one hundred and twenty stadia (twelve geographical miles) in length. The walls, of burnt brick, were two hundred cubits high and fifty thick; in them were two hundred and fifty towers and sixty bronze gates, and they were surrounded by a deep ditch. The Euphrates, which divided the city

into two equal parts, was embanked with walls of bricks, the openings of which, at the ends of the transverse streets, were closed by gates of bronze. A bridge, built on piers of hewn stone, united the two quarters of the city ; and at each end of it stood a royal palace ;—these erections were ascribed to Semiramis. Of two other public buildings of the greatest celebrity, the one was the temple of Belus, rising to a great height, and consisting of eight stories gradually diminishing in width, and ascended by a flight of steps, which wound round the whole building on the outside ; in the uppermost story was the golden statue of Belus, with a golden altar and other treasures ;—this building was also ascribed to Semiramis. The other edifice referred to was the "hanging gardens" of Nebuchadnezzar, laid out upon terraces which were raised above one another on arches. The houses of the city were three or four stories in height, and the streets were straight, intersecting one another at right angles. The buildings were almost universally constructed of bricks, some burnt and some only sun-dried, cemented together with hot bitumen, and in some cases with mortar.

—SMITH'S "*Classical Dictionary.*"

BELSHAZZAR.

[*The Hall of Banquet, with the Fiery Letters on the Wall.*]

Arioch. Hath the king spoken ?
Sabaris. Not a word : as now,
He hath sate, with eyes that strove to be familiar
With those red characters of fire ; but still
The agony of terror hath not passed
From his chill frame. But if a word, a step,
A motion, from these multitudes reclined
Down each long festal board—the bursting string
Of some shrill instrument—or even the wind
Whispering amid the plumes and shaking lamps,
Disturb him—by some mute imperious gesture,
Or by his brow's stern anger, he commands
All the vast halls to silence.
Arioch. Peace ! he hears
Our murmured speech.
Sabaris. No.
Arioch. Did ye not observe him
When his hand fell upon the all-ruling sceptre—

The bitter and self-mocking laugh that passed
O'er his pale cheek?
Sabaris. His lips move, but he speaks not!
All still again——
Arioch. They are here—the priests and seers,
Their snowy garments sweep the hall.
Sabaris. Behold!
He motions them to advance and to retreat
At once, and pants, yet shudders, to demand
Their answer.
Belshazzar. Oh! Chaldea's worshipped sages,
Oh! men of wisdom, that have passed your years—
Your long and quiet solitary years—
In tracing the dim sources of the events
That agitate this world of man—oh! ye
That in the tongues of every clime discourse;
Ye that hold converse with the eternal stars,
And in their calm prophetic courses read
The destinies of empires; ye whose dreams
Are thronged with the predestined images
Of things that are to be; to whom the Fates
Unfold their secret counsels; to whose sight
The darkness of futurity withdraws,
And one vast present fills all time—behold
Yon burning characters! and read, and say
Why the dark Destinies have hung their sentence
Thus visible to the sight, but to the mind
Unsearchable! Ye have heard the rich reward;
And I but wait to see whose neck shall wear
The chain of glory——
Ha! each pale, fallen lip
Voiceless! and each upon the other turns
His wan and questioning looks. Kalassan! thou
Art like the rest, and gazest on thy fellows
In blank and sullen ignorance. Spurn them forth!
Ye wise! ye learned! ye with Fate's mysteries
Intrusted! Spurn, I say, and trample on them!
Let them be outcast to the scorn of slaves!
Let children pluck their beards, and every voice
Hoot at them as they pass!
Despair! despair!
This is thy palace now! No throne, no couch
Beseems the king whose doom is on his walls
Emblazed—yet whose vast empire finds not one
Whose faithful love can show its mystic import!
Low in the dust, upon the pavement stone,
Belshazzar takes his rest! Ye hosts of slaves,
Behold your king! the lord of Babylon!—

Speak not—for he that speaks in other words
Than to expound those fiery characters
Shall ne'er speak more!
Nitocris [*entering.*] As thou didst give command,
My son, I 'm here to see the all-glorious feast
That shames the earth, and copes with heaven.
Great powers!
Is 't thus? Oh! look not with that mute reproach,
More terrible than anger, on thy mother!
Oh, pardon my rash taunts!—my son! my son!
Thou art but now the beauteous smiling child
That from my bosom drank the flowing life;
By whom I 've passed so many sleepless nights
In deeper joy than slumber e'er could give!
The sole refreshment of my weary spirit
To gaze on thee!—Alas, 'twas all my crime;—
I gave to thy young lips the mantling cup
Of luxury and pride; I taught thee first
That the wide earth was made for thee, and man
Born for thy uses!
Belshazzar. Find me who will read it,
And thou wilt give me then a life more precious
Than that I once received of thee.
Nitocris. 'Twas he!—
I saw him as I passed along the courts—
The Hebrew that, when visions of the night
Shook the imperial soul of Nabonassar,
Like one to whom the dimly-peopled realms
Of sleep were clear as the bright noontide heavens,
Spake——
Belshazzar. With the speed of lightning call him hither.
No more, my mother—till he comes, no more.
Arioch. King of the world, he 's here.
Belshazzar. Not yet! not yet!
Delay him! hold him back!—My soul 's not strung
To the dire knowledge.
Up the voiceless hall
He moves; nor doth the white and ashen fear
That paints all faces change one line of his.
Audacious slave! walks he erect and firm
When kings are grovelling on the earth? Give place!
Why do ye crowd around him? Back! I say.
Is your king heard—or hath he ceased to rule?
Nitocris. Alas, my son, fear levels kings and slaves.
Belshazzar. Art thou that Daniel of the Hebrew race
In whom the excellence of wisdom dwells
As in the gods? I have heard thy fame;—behold
Yon mystic letters flaming on the wall,

That, in the darkness of their fateful import,
Baffle the wisest of Chaldea's sages!
Read and interpret, and the satrap robe
Of scarlet shall invest thy limbs—the chain
Of gold adorn thy neck—and all the world
Own thee third ruler of Chaldea's realm!

Daniel. Belshazzar, be thy gifts unto thyself,
And thy rewards to others. I, the servant
Of God, will read God's writing to the king.
The Lord of hosts to thy great ancestor,
To Nabonassar, gave the all-ruling sceptre
O'er all the nations, kingdoms, languages:
Lord paramount of life and death, he slew
Where'er he willed; and where he willed, men lived;
His word exalted, and his word debased;
And so his heart swelled up; and, in its pride,
Arose to heaven! But then the lord of earth
Became an outcast from the sons of men—
Companion of the browsing beasts! the dews
Of night fell cold upon his crownless brow,
And the wild asses of the desert fed
Round their unenvied peer! And so he knew
That God is sovereign o'er earth's sceptred lords.
But thou, his son, unwarned, untaught, untamed,
Belshazzar, hast arisen against the Lord,
And in the vessels of His house hast quaffed
Profane libations, 'mid thy slaves and women,
To gods of gold, and stone, and wood, and laughed
The King of kings, the God of gods, to scorn.
Now hear the words, and hear their secret meaning—
"Numbered!" twice "Numbered! Weighed! Divided!" King,
Thy reign is numbered, and thyself art weighed,
And wanting in the balance, and thy realm
Severed, and to conquering Persian given!

Arioch. What vengeance will he wreak? The pit of lions—
The stake——

Belshazzar. Go—lead the Hebrew forth arrayed
In the proud robe. Let all the city hail
The honored of Belshazzar. Oh, not long
Will that imperial name command your awe!
And oh! ye bright and festal halls, whose vaults
Were full of sweet sounds as the summer groves,
Must ye be changed for chambers where no tone
Of music sounds, nor melody of harp,
Or lute, or woman's melting voice!—My mother!—
And how shall we two meet the coming ruin?
With arms, thou sayest; but with what arms to front
The Invisible, that in the silent air

Wars on us? Shall we seek some place of silence,
Where the cold cypress shades our fathers' tombs,
And grow familiar with the abode of Death?
And yet how calm, how fragrant, how serene
The night! When empires fall, and Fate thrusts down
The monarchs from their ancient thrones, 'tis said
The red stars meet, with ominous, hostile fires;
And the dark vault of heaven flames all across
With meteors, and the conscious earth is rocked,
And foaming rivers burst their shores! But now,
Save in my soul, there is no prescient dread;
Nought but my fear-struck brow is dark and sad;
All sleeps in moonlight silence! Ye can wave,
O happy gardens! in the cool night airs,
Your playful branches; ye can rise to heaven,
And glitter, my unconscious palace-towers;
No gliding hand, no prophet's voice, to you
Hath rent the veil that hides the awful future!
Well, we 'll go rest once more on kingly couches,
My mother; and we 'll wake and feel that earth
Still trembles at our nod, and see the slaves
Reading their fate in our imperial looks!
And then—and then—ye gods, that I had still
Nought but my shuddering and distracting fears!
That those dread letters might resume once more
Their dark and unintelligible brightness;
Or that were o'er, and I and Babylon
Were what a few short days and hours will make us.

—Milman.

PHŒNICIAN MANUFACTURES AND COMMERCE.

The textile fabrics of the Sidonians, and the purple cloths of the Tyrians, were celebrated from the earliest antiquity.

The Tyrian purple was not a single color, but was a generic name for all the shades of purple and scarlet. The dye was obtained from a shell-fish found in great abundance on the shores of the Mediterranean. Vegetable dyes of great beauty and variety were also used; the dyeing was always performed in the raw materials; and the Phœnicians alone understood the art of producing shot colors by using threads of different tints. Glass was very anciently manufactured both at Sidon and Sarepta; tradition, indeed, ascribes the invention of glass to the Phœnicians; but the Egyptians seem to have a claim at least as good

to the discovery. Carving in wood and ivory, manufactures of jewellery and toys, complete all that has been recorded of the products of Tyrian industry; and it seems probable that their commerce consisted more in the interchange of foreign commodities than in the export of their own wrought goods.

The land-trade of the Phœnicians may be divided into three great branches—the Arabian, which included the Egyptian and that with the Indian seas; the Babylonian, to which is referred the commerce with Central Asia and North India; and the Armenian, including the overland trade with Scythia and the Caucasian countries.

But the Mediterranean Sea was the great highroad of Phœnician commerce. It probably commenced with piracy; for in the infancy of Grecian civilization we find frequent mention of the kidnapping practised by corsairs from Tyre and Sidon. But when Greece advanced in power, and Athens and Corinth had fleets of their own, the Greeks became the rivals and political enemies of the Phœnicians, purchasing from them only such articles as could not be procured from their own colonies in Asia Minor. Spain was the richest country of the ancient world in the precious metals. The Phœnician colonies enslaved the natives, and compelled them to work in the mines. These metallic productions are enumerated by Ezekiel: "Tarshish [Tartessus, or south-western Spain] was thy merchant by reason of the multitude of all kind of riches; with silver, iron, tin, and lead, they traded in thy fairs." From Spain the Phœnicians entered the Atlantic Ocean, and proceeded to the south of the British Islands, where they procured the tin of Cornwall; and probably to the coasts of Prussia for amber, which in the ancient world was deemed more precious than gold. In the eastern seas, the Phœnicians had establishments on the Arabian and Persian Gulfs, whence they traded with the coasts of India and Africa, and the island of Ceylon. During the reign of Pharaoh-Necho, king of Egypt, they discovered the passage round the Cape of Good Hope; but this led to no important results, on account of the calamities that Tyre endured from the invasion of Nebuchadnezzar. Though their voyages did not equal in daring those of modern times, yet, when we consider that they were ignorant of the mariner's compass, and of the art of taking accurate astronomical observations, it is wonderful to reflect on the commercial enterprise of a people whose ships were to be seen in the harbors of Britain and Ceylon.

—W. C. Taylor.

ON THE PLEASURES OF SCIENCE.

To pass our time in the study of the sciences has, in all ages, been reckoned one of the most dignified and happy of human occupations, and the name of philosopher, or lover of wisdom, is given to those who lead such a life. But it is by no means necessary that a man should do nothing else than study known truths, and explore new, in order to earn this high title. Some of the greatest philosophers, in all ages, have been engaged in the pursuits of active life; and he who, in whatever station his lot may be cast, prefers the refined and elevating pleasures of knowledge to the low gratification of the senses, richly deserves the name of a philosopher.

It is easy to show that there is a positive gratification resulting from the study of the sciences. If it be a pleasure to gratify curiosity—to know what we were ignorant of—to have our feelings of wonder called forth, how pure a delight of this very kind does natural science hold out to its students! Recollect some of the extraordinary discoveries of mechanical philosophy. Is there anything, in all the idle books of tales and horrors with which youthful readers are so much delighted, more truly astonishing, than the fact, that a few pounds of water may, without any machinery, produce an irresistible force? What can be more strange, than that an ounce weight should balance hundreds of pounds, by the intervention of a few bars of thin iron?—Observe the extraordinary truths which optical science discloses! Can anything surprise us more, than to find that the color of white is a mixture of all others; that red, and blue, and green, and all the rest, merely by being blended in certain proportions, form what we had fancied rather to be no color at all than all colors together? Chemistry is not behind in its wonders. That the diamond should be made of the same material with coal; that water should be chiefly composed of an inflammable substance; that acids should be almost all formed of different kinds of air, and that one of those acids, whose strength can dissolve almost any of the metals, should be made of the self-same ingredients with the common air we breathe,—these surely are things to excite the wonder of any reflecting mind, nay, of any one but little accustomed to reflect. And yet these are trifling when compared with the prodigies which astronomy opens to our view: the enormous masses of the heavenly bodies; their immense distances;

their countless numbers, and their motions, whose swiftness mocks the uttermost efforts of the imagination.

Akin to this pleasure of contemplating new and extraordinary truths, is the gratification of a more learned curiosity, by tracing resemblances and relations between things which, to common apprehension, seem widely different. It is surely a satisfaction, for instance, to know that the same thing which causes the sensation of heat causes also fluidity; that electricity, the light which is seen on the back of a cat when slightly rubbed on a frosty evening, is the very same matter with the lightning of the clouds; that plants breathe like ourselves, but differently by day and by night; that the air which burns in our lamps enables a balloon to mount. Nothing can at first sight appear less like, or less likely to be caused by the same thing, than the processes of burning and of breathing,—the rust on metals and burning,—the influence of a plant on the air it grows in by night, and of an animal on the same air at any time, nay, and of a body burning in that air; and yet all these operations, so unlike to common eyes, when examined by the light of science, are the same. Nothing can be less like than the working of a vast steam-engine and the crawling of a fly upon the window; yet we find that these two operations are performed by the same means—the weight of the atmosphere; and that a sea-horse climbs the ice-hills by no other power. Can anything be more strange to contemplate? Is there, in all the fairy tales that ever were fancied, anything more calculated to arrest the attention, and to occupy and gratify the mind, than this most unexpected resemblance between things so unlike to the eyes of ordinary beholders? Then, if we raise our views to the structure of the heavens, we are again gratified with tracing accurate but most unexpected resemblances. Is it not in the highest degree interesting to find, that the power which keeps the earth in its shape and in its path, wheeling round the sun, extends over all the other worlds that compose the universe, and gives to each its proper place and motion; that the same power keeps the moon in her path round the earth; that the same power causes the tides upon our earth, and the peculiar form of the earth itself; and that, after all, it is the same power which makes a stone fall to the ground? To learn these things, and to reflect upon them, fills the mind, and produces certain as well as pure gratification.

The highest of all our gratifications in the study of science remains. We are raised by science to an understanding of the

infinite wisdom and goodness which the Creator has displayed in all His works. Not a step can we take in any direction without perceiving the most extraordinary traces of design; and the skill everywhere conspicuous is calculated in so vast a proportion of instances to promote the happiness of living creatures, and especially of ourselves, that we can feel no hesitation in concluding, that if we knew the whole scheme of Providence, every part would appear to be in harmony with a plan of absolute benevolence. Independently, however, of this most consoling inference, the delight is inexpressible, of being able to follow, as it were, with our eyes, the marvellous works of the great Architect of nature, and to trace the unbounded power and exquisite skill which are exhibited in the most minute as well as in the mightiest parts of His system. —BROUGHAM.

THE SEA.

"THE sea is His, and He made it," cries the Psalmist of Israel, in one of those bursts of enthusiasm in which he so often expresses the whole of a vast subject by a few simple words. Whose else, indeed, could it be, and by whom else could it have been made? Who else can heave its tides and appoint its bounds? Who else can urge its mighty waves to madness with the breath and wings of the tempest, and then speak to it again in a master's accents, and bid it be still? Who else could have peopled it with countless inhabitants, and filled it from its deepest bed to its expanded surface, filled it from its centre to its remotest shores, filled it to the brim with beauty and mystery and power? Majestic ocean! Glorious sea! No created being rules thee or made thee.

There is mystery in the sea. There is mystery in its depths. It is unfathomed, and perhaps unfathomable. What glittering riches, what heaps of gold, what stores of gems, there must be scattered in lavish profusion in the ocean's lowest bed! What spoils from all climates, what works of art from all lands, have been ingulfed by the insatiable and reckless waves! Who shall go down to examine and reclaim this uncounted and idle wealth? Who bears the keys of the deep? Who but He to whom the wildest waves listen reverently, and to whom all nature bows; He who shall one day speak, and be heard in the ocean's profoundest caves; to whom the deep, even the lowest deep, shall give up its dead, when the sun shall sicken, and the earth and

the isles shall languish, and the heavens be rolled together like a scroll, and there shall be NO MORE SEA !

In early times, in the scriptural and classic periods, the great oceans were unknown. Mankind—at least that portion whose history has descended to us—dwelt upon the borders of an inland, mediterranean sea. They had never heard of such an expanse of water as the Atlantic, and certainly had never seen it. The land-locked sheet which lay spread out at their feet was at all times full of mystery, and often even of dread and secret misgiving. Those who ventured forth upon its bosom came home and told marvellous tales of the sights they had seen, and the perils they had endured. Homer's heroes returned to Ithaca with the music of the sirens in their ears, and the cruelties of the giants upon their lips. The Argonauts saw whirling rocks implanted in the sea, to warn and repel the approaching navigator; and, as if the mystery of the waters had tinged with fable even the dry land beyond it, they filled the Caucasus with wild stories of enchantresses, of bulls that breathed fire, and of a race of men that sprang, like a ripened harvest, from the prolific soil. If the ancients were ignorant of the shape of the earth, it was for the very reason that they were ignorant of the ocean. Their geographers and philosophers, whose observations were confined to fragments of Europe, Asia, and Africa, alternately made the world a cylinder, a flat surface begirt by water, a drum, a boat, a disk. The legends that sprang from these confused and contradictory notions made the land a scene of marvels, and the water an abode of terrors.

At a later period, when, with the progress of time, the love of adventure or the needs of commerce had drawn the navigator from the Mediterranean through the Pillars of Hercules into the Atlantic, and when some conception of the immensity of the waters had forced itself upon minds dwarfed by the contracted limits of the inland sea, then the ocean became in good earnest a receptacle of gloomy and appalling horrors, and the marvels narrated by those fortunate enough to return, told how deeply the imagination had been stirred by the new scenes opened to their vision. Pytheas, who coasted from Marseilles to the Shetland Isles, and who there obtained a glance at the bleak and wintry desolation of the North Sea, declared, on reaching home, that his further progress was barred by an immense black mollusk, which hung suspended in the air, and in which a ship would be inextricably involved, and where no man could breathe. The menaces

of the South were even more appalling than the perils of the North; for he who should venture, it was said, across the equator into the regions of the sun, would be changed into a negro for his rashness; besides, in the popular belief, the waters there were not navigable. Upon the quaint charts of the Middle Ages, a giant located upon the Canary Islands forbade all further venture westward, by brandishing his formidable club in the path of all vessels coming from the east. Upon these singular maps, the concealed and treacherous horrors of the deep were displayed in the grotesque shapes of sea-monsters and distorted water-unicorns, which were represented as careering through space and waylaying the navigators. Even in the time of Columbus, and when the introduction of the compass into European ships should have somewhat diminished the fantastic terrors of the sea, we find that the Arabians, the best geographers of the time, represented the bony and gnarled hand of Satan as rising from the waves of the sea of darkness—as the Atlantic was then called—ready to seize and ingulf the presumptuous mariner. The sailors of Columbus, on reaching the Sargasso Sea, where the collected weeds offered an impediment to their progress, thought they had arrived at the limit of navigation, and the end of the world. Five years later the crew of Da Gama, on doubling the Cape of Good Hope, imagined they saw, in the threatening clouds that gathered about Table Rock, the form of a spectre waving off their vessel, and crying woe to all who should thus invade his dread dominion. The Neptune of the classics, in short, who disported himself in the narrow waters of the Mediterranean, and of whose wrath we have read the famous mythologic accounts, was a deity altogether bland and *débonnaire* compared to the gloomy and revengeful monopolist of the seas, such as the historians and geographers of the Middle Ages painted him.

And now Columbus had discovered the Western Continent, Da Gama had found an ocean route to the Indies, and Magellan, sailing round the world, had proved its sphericity, and approached the Spice Islands from the east. For centuries now, the two great oceans were the scenes of grand and useful maritime expeditions. The tropical islands of the Pacific arose, one by one, from the bosom of the sea, to reward the navigator, or relieve the outcast. For years property was not safe upon the sea, and trading ships went armed, while the armed vessels of nations turned buccaneers. Commerce was by and by spread over the world, and civilization and Christianity were introduced into the

desert and the wilderness. Two centuries more, and steam made the Atlantic Ocean a ferry transit.

The ocean, then, has a history; it has a past worth narrating, adventures worth telling, and it has played a part in the advancement of science, in the extension of geographical knowledge, in the spread of civilization and the progress of discovery, which it is eminently worth our while to ponder and digest.

—GOODRICH'S *The Sea.*

THE FORGING OF THE ANCHOR.

COME, see the *Dolphin's* anchor forged; 'tis at a white heat now;
The bellows ceased, the flames decreased; though on the forge's brow
The little flames still fitfully play through the sable mound;
And fitfully you still may see the grim smiths ranking round,
All clad in leathern panoply, their broad hands only bare:
Some rest upon their sledges here, some work the windlass there.
The windlass strains the tackle chains, the black mound heaves below,
And red and deep, a hundred veins burst out at every throe;
It rises, roars, rends all outright—O Vulcan, what a glow!
'Tis blinding white, 'tis blasting bright—the high sun shines not so!
The high sun sees not, on the earth, such fiery, fearful show,
The roof-ribs swarth, the candent hearth, the ruddy lurid row
Of smiths that stand, an ardent band, like men before the foe.
As quivering through his fleece of flame, the sailing monster, slow
Sinks on the anvil—all about the faces fiery grow.
"Hurrah!" they shout, "leap out—leap out," bang, bang the sledges go;
Hurrah! the jetted lightnings are hissing high and low;
A hailing fount of fire is struck at every squashing blow,
The leathern mail rebounds the hail, the rattling cinders strow
The ground around; at every bound the sweltering fountains flow;
And thick and loud the swinking crowd, at every stroke, pant "Ho!"

Leap out, leap out, my masters; leap out and lay on load!
Let 's forge a goodly anchor—a bower thick and broad;
For a heart of oak is hanging on every blow, I bode,
And I see the good ship riding, all in a perilous road;
The low reef roaring on her lee—the roll of ocean pour'd
From stem to stern, sea after sea—the mainmast by the board;
The bulwarks down, the rudder gone, the boats stove at the chains!
But courage still, brave mariners, the bower yet remains,
And not an inch to flinch he deigns, save when ye pitch sky high,
Then moves his head, as though he said, "Fear nothing, here am I!"
Swing in your strokes in order, let foot and hand keep time!
Your blows make music sweeter far than any steeple's chime.

But, while ye swing your sledges, sing; and let the burden be,
"The anchor is the anvil king, and royal craftsmen we."
Strike in, strike in, the sparks begin to dull their rustling red.
Our hammers ring with sharper din, our work will soon be sped.
Our anchor soon must change his bed of fiery rich array,
For a hammock at the roaring bows, or an oozy couch of clay;
Our anchor soon must change the lay of merry craftsmen here,
For the "Yeo-heave-o," and the "Heave-away," and the sighing seaman's cheer;
When weighing slow, at eve they go, far, far from love and home,
And sobbing sweethearts, in a row, wail o'er the ocean foam.

In livid and obdurate gloom, he darkens down at last;
A shapely one he is, and strong, as e'er from cat was cast.
O trusted and trustworthy guard, if thou hadst life like me,
What pleasures would thy toils reward beneath the deep green sea!
O deep-sea diver, who might then behold such sights as thou?
The hoary monsters' palaces! methinks what joy 'twere now
To go plump plunging down amid the assembly of the whales,
And feel the churn'd sea round me boil beneath their scourging tails!
Then deep in tangle-woods to fight the fierce sea-unicorn,
And send him foil'd and bellowing back, for all his ivory horn;
To leave the subtle sworder-fish, of bony blade forlorn;
And for the ghastly grinning shark, to laugh his jaws to scorn;
To leap down on the kraken's back, where, 'mid Norwegian isles,
He lies, a lubber anchorage for sudden shallow'd miles;
Till snorting, like an under-sea volcano, off he rolls,
Meanwhile to swing, a-buffeting the far astonish'd shoals
Of his back-browsing ocean-calves; or haply in a cove,
Shell-strown, and consecrate of old to some Undine's love,
To find the long-hair'd mermaidens; or, hard by icy lands,
To wrestle with the sea-serpent, upon cerulean sands.

O broad-arm'd fisher of the deep, whose sports can equal thine?
The *Dolphin* weighs a thousand tons, that tugs thy cable line;
And night by night, 'tis thy delight, thy glory day by day,
Through sable sea and breaker white, the giant game to play,
But, shamer of our little sports! forgive the name I gave,
A fisher's joy is to destroy—thine office is to save.

O lodger in the sea-king's halls, couldst thou but understand
Whose be the white bones by thy side, or who that dripping band,
Slow swaying in the heaving wave, that round about thee bend,
With sounds like breakers in a dream, blessing their ancient friend—
Oh, couldst thou know what heroes glide with larger steps round thee,
Thine iron side would swell with pride, thou 'dst leap within the sea!

Give honor to their memories who left the pleasant strand,
To shed their blood so freely for the love of fatherland—

Who left their chance of quiet age and grassy churchyard grave
So freely, for a restless bed amid the tossing wave—
Oh, though our anchor may not be all I have fondly sung,
Honor him for their memory whose bones he goes among!

—SAMUEL FERGUSON.

THE BATTLE OF MARATHON.

(B.C. 490.)

To the left of the Athenians was a low chain of hills, clothed with trees: to their right, a torrent. Their front was long; for to render it more imposing in extent, and to prevent being outflanked by the Persian numbers, the centre ranks were left weak and shallow, but on either wing the troops were drawn up more solidly and strong. Callimachus commanded the right wing; the Platæans formed the left; the whole was commanded by Miltiades. They had few, if any, horsemen or archers.

The details which we possess of their arms and military array, if not in this, in other engagements of the same period, will complete the picture. We may behold them clad in bright armor, of good proof and well-tempered, which covered breast and back; the greaves, so often mentioned by Homer, were still retained; their helmets were wrought and crested, the cones mostly painted in glowing colors, and the plumage of feathers, or horse-hair, rich and waving in proportion to the rank of the wearer. Broad, sturdy, and richly ornamented were their bucklers, the pride and darling of their arms, the loss of which was the loss of honor. Their spears were ponderous, thick, and long, (a chief mark of contradistinction from the light shaft of Persia,) and, with their short broadsword, constituted their main weapons.

No Greek army marched to battle without vows and sacrifice and prayer, and now, in the stillness of the pause, the divine rites were solemnized. Loud broke the trumpets; the standards, wrought with the sacred bird of Athens, were raised on high: it was the signal of battle, and the Athenians rushed with an impetuous vehemence upon the Persian power. "They were the first Greeks of whom I have heard," says the historian, "who ever *ran* to attack a foe; the first, too, who ever beheld without dismay the garb and armor of the Medes; for, hitherto in Greece, the very name of Mede had excited terror."

When the Persian army, with its numerous horse, (animals as

well as men protected by coats of mail,) its expert bowmen, its lines and deep files of turbaned soldiers, gorgeous with many a blazing standard, headed by leaders well hardened, despite their gay garbs and adorned breastplates, in many a more even field; when, I say, this force beheld the Athenians rushing towards them, they considered them, thus few and destitute alike of cavalry and archers, as madmen hurrying to destruction. But it was evidently not without deliberate calculation that Miltiades had so commenced the attack. The warlike experience of his guerilla life had taught him to know the foe against whom he fought. To volunteer the assault, was to forestall and cripple the charge of the Persian horse; besides, the long lances, the heavy arms, the hand to hand valor of the Greeks, must have been no light encounter to the more weakly mailed and less formidably armed infantry of the east. Accustomed themselves to give the charge, it was a novelty and a disadvantage to receive it.

Long, fierce, and stubborn was the battle. The centre wing of the barbarians, composed of the Sacians and the pure Persian race, at length pressed hard upon the shallow centre of the Greeks, drove them back into the country, and, eager with pursuit, left their own wings to the charge of Callimachus on the one side, and the Platæan forces on the other. The brave Callimachus, after the most signal feats of valor, fell fighting in the field; but his troops, undismayed, smote on with spear and sword.

The barbarians retreated backward to the sea, where swamps and marshes encumbered their movements; and here, though the Athenians did not pursue them far, the greater portion were slain, hemmed in by the morasses, and probably ridden down by their own disordered cavalry. Meanwhile, the two tribes that had formed the centre, one of which was commanded by Aristides, retrieved themselves with a mighty effort; and the two wings having routed their antagonists, now in closing toward each other, intercepted the barbarian centre; which, thus attacked in front and rear, was defeated with prodigious slaughter.

Evening came on: confused and disorderly, the Persians now only thought of flight; the whole army retired to their ships, hard chased by the Grecian victors, who, amid the carnage, fired the fleet. Cynægirus, brother to Æschylus the tragic poet, (himself highly distinguished for his feats that day,) seized one of the vessels by the poop: his hand was severed by an axe: he died gloriously of his wounds. But to none did the fortunes of that

field open a more illustrious career than to a youth of the tribe of Leontes, in whom, though probably then but a simple soldier in the ranks, were first made manifest the nature and the genius destined to command. The name of that youth was THEMISTOCLES.

Seven vessels were captured; six thousand four hundred of the barbarians fell on the field. The Athenians and their brave allies lost only one hundred; but among them perished many of their bravest nobles. It was a superstition not uncharacteristic of that imaginative people, and evincing how greatly their ardor was aroused, that many of them fancied they beheld the gigantic shade of their ancestral Theseus, completely armed, and bearing down before them upon the foe!

A picture of the battle, representing Miltiades in the foremost place, and solemnly preserved in public, was deemed no inadequate reward to that great captain; and yet, conspicuous above the level plain of Marathon rises a long barrow, fifteen feet in height, the supposed sepulchre of the Athenian heroes. Still does a romantic legend, not unfamiliar with our traditions of the North, give a supernatural terror to the spot. Nightly, along the plains are yet heard by superstition the neighing of chargers and the rushing shadows of spectral war. And still, throughout the civilized world, (civilized how much by the art and lore of Athens!) men of every clime, of every political persuasion, feel as Greeks at the battle of Marathon. Later fields have presented the spectacle of an equal valor, and almost the same disparities of slaughter; but never, in the annals of the earth, were united so closely in our applause, admiration for the heroism of the victors, and sympathy for the holiness of their cause.

—BULWER.

DEATH OF LEONIDAS.

(B.C. 480.)

IT was the wild midnight,—a storm was in the sky,
The lightning gave its light, and the thunder echo'd by;
The torrent swept the glen, the ocean lash'd the shore,—
Then rose the Spartan men, to make their bed in gore!

Swift from the deluged ground three hundred took the shield;
Then, silent, gather'd round the leader of the field.
He spoke no warrior-word, he bade no trumpet blow;
But the signal thunder roar'd, and they rush'd upon the foe.

The fiery element show'd, with one mighty gleam,
Rampart and flag and tent, like the spectres of a dream;
All up the mountain side, all down the woody vale,
All by the rolling tide, waved the Persian banners pale.

And King Leonidas, among the slumbering band,
Sprang foremost from the pass, like the lightning's living brand;
Then double darkness fell, and the forest ceased to moan,
But there came a clash of steel, and a distant dying groan.

Anon, a trumpet blew, and a fiery sheet burst high,
That o'er the midnight threw a blood-red canopy:
A host glared on the hill, a host glared by the bay;
But the Greeks rush'd onward still, like leopards in their play.

The air was all a yell, and the earth was all a flame,
Where the Spartans' bloody steel on the silken turbans came;
And still the Greeks rush'd on, beneath the fiery fold,
Till, like a rising sun, shone Xerxes' tent of gold.

They found a royal feast, his midnight banquet, there!
And the treasures of the East lay beneath the Doric spear:
Then sat to the repast the bravest of the brave;
That feast must be their last—that spot must be their grave!

They pledged old Sparta's name in cups of Syrian wine,
And the warrior's deathless fame was sung in strains divine;
They took the rose-wreathed lyres from eunuch and from slave,
And taught the languid wires the sounds that Freedom gave.

But now the morning star crown'd Œta's twilight brow,
And the Persian horn of war from hill began to blow;
Up rose the glorious rank, to Greece one cup pour'd high,
Then, hand in hand, they drank—"To Immortality!"

Fear on King Xerxes fell, when, like spirits from the tomb,
With shout and trumpet-knell, he saw the warriors come;
But down swept all his power, with chariot and with charge,—
Down pour'd the arrowy shower, till sank the Dorian targe.

They march'd within the tent, with all their strength unstrung;
To Greece one look they sent, then on high their torches flung:
To heaven the blaze uproll'd, like a mighty altar-fire;
And the Persians' gems and gold were the Grecians' funeral pyre.

Their king sat on his throne, his captains by his side,
While the flame rush'd roaring on, and their pæan loud replied!
Thus fought the Greek of old! Thus will he fight again!
Shall not the self-same mould bring forth the self-same men?

—Croly.

THE FLIGHT OF XERXES.

(B.C. 480.)

I saw him on the battle eve,
When like a king he bore him—
Proud hosts were there in helm and greave,
And prouder chiefs before him:
The warrior, and the warrior's deeds—
The morrow, and the morrow's meeds—
No daunting thought came o'er him;
He look'd around him, and his eye
Defiance flash'd to earth and sky!

He look'd on ocean—its broad breast
Was cover'd with his fleet;
On earth—and saw, from east to west,
His banner'd millions meet;
While rock, and glen, and cave, and coast,
Shook with the war-cry of that host,
The thunder of their feet!
He heard the imperial echoes ring—
He heard—and felt himself a king!

I saw him next alone—nor camp
Nor chief his steps attended;
Nor banner blazed, nor courser's tramp
With war-cries proudly blended.
He stood alone, whom fortune high
So lately seem'd to deify;
He, who with Heaven contended,
Fled, like a fugitive and slave!
Behind—the foe; before—the wave!

He stood;—fleet, army, treasure—gone—
Alone, and in despair!
While wave and wind swept ruthless on,
For *they* were monarchs there;
And Xerxes in a single bark,
Where late his thousand ships were dark,
Must all their fury dare;
What a revenge—a trophy, this,
For thee, immortal Salamis!

—Miss Jewsbury.

THE SCHOOLS OF ATHENS.

ATHENS, after her Persian triumphs, adopted the philosophy of Ionia and the rhetoric of Sicily; and these studies became the patrimony of a city whose inhabitants, about thirty thousand males, condensed within the period of a single life the genius of ages and millions. Our sense of the dignity of human nature is exalted by the simple recollection that Isocrates was the companion of Plato and Xenophon; that he assisted, perhaps with the historian Thucydides, at the first representations of the "Œdipus" of Sophocles and the "Iphigenia" of Euripides; and that his pupils Æschines and Demosthenes contended for the crown of patriotism in the presence of Aristotle, the master of Theophrastus, who taught at Athens with the founders of the Stoic and Epicurean sects. The ingenuous youth of Attica enjoyed the benefits of their domestic education, which was communicated without envy to the rival cities. Two thousand disciples heard the lessons of Theophrastus; the schools of rhetoric must have been still more populous than those of philosophy; and a rapid succession of students diffused the fame of their teachers as far as the utmost limits of the Grecian language and name. Those limits were enlarged by the victories of Alexander; the arts of Athens survived her freedom and dominion; and the Greek

colonies which the Macedonians planted in Egypt, and scattered over Asia, undertook long and frequent pilgrimages to worship the Muses in their favorite temple on the banks of the Ilissus. The Latin conquerors respectfully listened to the instructions of their subjects and captives; the names of Cicero and Horace were enrolled in the schools of Athens; and after the perfect settlement of the Roman empire, the natives of Italy, of Africa, and of Britain, conversed in the groves of the Academy with their fellow-students of the East. The studies of philosophy and eloquence are congenial to a popular state, which encourages the freedom of inquiry, and submits only to the force of persuasion. In the republics of Greece and Rome the art of speaking was the powerful engine of patriotism or ambition; and the schools of rhetoric poured forth a colony of statesmen and legislators. When the liberty of public debate was suppressed, the orator, in the honorable profession of an advocate, might plead the cause of innocence and justice; he might abuse his talents in the more profitable trade of panegyric; and the same precepts continued to dictate the fanciful declamations of the sophist, and the chaster beauties of historical composition. The systems which professed to unfold the nature of God, of man, and of the universe, entertained the curiosity of the philosophic student; and, according to the temper of his mind, he might doubt with the Sceptics, or decide with the Stoics, sublimely speculate with Plato, or severely argue with Aristotle. The pride of the adverse sects had fixed an unattainable term of moral happiness and perfection: but the race was glorious and salutary; the disciples of Zeno, and even those of Epicurus, were taught both to act and to suffer; and the death of Petronius was not less effectual than that of Seneca to humble a tyrant by the discovery of his impotence. The light of science could not indeed be confined within the walls of Athens. Her incomparable writers address themselves to the human race; the living masters emigrated to Italy and Asia; Berytus, in later times, was devoted to the study of the law; astronomy and physic were cultivated in the museum of Alexandria; but the Attic schools of rhetoric and philosophy maintained their superior reputation from the Peloponnesian war to the reign of Justinian. Athens, though situate in a barren soil, possessed a pure air, a free navigation, and the monuments of ancient art. That sacred retirement was seldom disturbed by the business of trade or government; and the last of the Athenians were distinguished by their lively wit, the purity of their taste and language, their

social manners, and some traces, at least in discourse, of the magnanimity of their fathers. In the suburbs of the city, the *Academy* of the Platonists, the *Lyceum* of the Peripatetics, the *Portico* of the Stoics, and the *Garden* of the Epicureans, were planted with trees and decorated with statues; and the philosophers, instead of being immured in a cloister, delivered their instructions in spacious and pleasant walks, which, at different hours, were consecrated to the exercises of the mind and body. The genius of the founders still lived in those venerable seats; the ambition of succeeding to the masters of human reason excited a generous emulation; and the merit of the candidates was determined, on each vacancy, by the free voices of an enlightened people. —GIBBON.

THE INFLUENCE OF ATHENS.

IF we consider merely the subtlety of disquisition, the force of imagination, the perfect energy and elegance of expression, which characterize the great works of Athenian genius, we must pronounce them intrinsically most valuable. But what shall we say when we reflect that from hence have sprung, directly or indirectly, all the noblest creations of the human intellect; that from hence were the vast accomplishments and the brilliant fancy of Cicero, the withering fire of Juvenal, the plastic imagination of Dante, the humor of Cervantes, the comprehension of Bacon, the wit of Butler, the supreme and universal excellence of Shakespeare?

All the triumphs of truth and genius over prejudice and power, in every country and in every age, have been the triumphs of Athens. Wherever a few great minds have made a stand against violence and fraud, in the cause of liberty and reason, there has been her spirit in the midst of them; inspiring, encouraging, consoling;—by the lonely lamp of Erasmus, by the restless bed of Pascal, in the tribune of Mirabeau, in the cell of Galileo, on the scaffold of Sidney.

But who shall estimate her influence on private happiness? Who shall say how many thousands have been made wiser, happier, and better, by those pursuits in which she has taught mankind to engage; to how many the studies which took their rise from her have been wealth in poverty, liberty in bondage, health in sickness, society in solitude?

Her power is, indeed, manifested at the bar, in the senate, in the field of battle, in the schools of philosophy. But these are not her glory. Wherever literature consoles sorrow, or assuages pain; wherever it brings gladness to eyes which fail with wakefulness and tears, and ache for the dark house and the long sleep, —there is exhibited, in its noblest form, the immortal influence of Athens.

The dervise, in the Arabian tale, did not hesitate to abandon to his comrade the camels with their loads of jewels and gold, while he retained the casket of that mysterious juice which enabled him to behold at one glance all the hidden riches of the universe. Surely it is no exaggeration to say that no external advantage is to be compared with that purification of the intellectual eye, which gives us to contemplate the infinite wealth of the mental world, all the hoarded treasures of the primeval dynasties, all the shapeless ore of its yet unexplored mines. This is the gift of Athens to man.

Her freedom and her power have, for more than twenty centuries, been annihilated; her people have degenerated into timid slaves; her language, into a barbarous jargon; her temples have been given up to the successive depredations of Romans, Turks, and Scotchmen; but her intellectual empire is imperishable.

And, when those who have rivalled her greatness shall have shared her fate; when civilization and knowledge shall have fixed their abode in distant continents; when the sceptre shall have passed away from England; when, perhaps, travellers from distant regions shall in vain labor to decipher on some mouldering pedestal the name of our proudest chief, shall hear savage hymns chanted to some misshapen idol over the ruined dome of our proudest temple, and shall see a single naked fisherman wash his nets in the river of the ten thousand masts,—her influence and her glory will still survive, fresh in eternal youth, exempt from mutability and decay, immortal as the intellectual principle from which they derived their origin, and over which they exercise their control. —MACAULAY.

FROM "ORATION ON THE CROWN."

IF to you alone of all others, Æschines, the future had been revealed at the time of our public deliberations upon these matters, you were bound to disclose it; if you did not foresee it, you were responsible for being as ignorant as the rest of us.

How dare you, then, accuse me on this score, any more than I am to accuse you? So much better a citizen was I than you in those circumstances of which I am speaking, (and of others, for the present, I say nothing,) that I devoted myself to what all men deemed the best interests of the state, shrinking from no personal danger, nor so much as throwing away a thought upon it; while you gave no better advice, (if you had, mine would not have been followed,) nor did you lend your aid in executing mine, but whatever the meanest and most disaffected person could do, that you are found throughout these transactions to have done. And thus, at one and the same time, Aristratus in Naxos, and Aristolaus in Thasus, the inveterate enemies of this country, are condemning the friends of Athens, and at Athens Æschines is impeaching Demosthenes! Yet ought that man, whose renown lies in the misfortunes of Greece, rather to perish than accuse another; and that man cannot be a friend to his country whose purposes are served by the same events as benefit her enemies. You prove this by all the life you lead, and all the things you do, and all the measures you propound, and all the measures you do not propound. Is there anything in agitation for the interests of the country? Æschines is mute. Does anything go wrong, and disappoint expectations? Forth comes Æschines, as old fractures and sprains annoy us afresh the moment the body is stricken with disease.

But, since he dwells so much on the actual events, I will hazard a somewhat bold assertion, and let not any one, I pray, be staggered by its extravagance, but attend particularly to my statement. If the events of futurity had been manifest to all, and if all had foreseen them, and you, Æschines, had foretold them, and had bellowed out your protestations ever so vociferously, instead of never uttering a word—not even then ought the country to have acted otherwise than she did, if she had any regard either for her glory or her ancestry, or her posterity. Now indeed she is supposed to have been frustrated in her proceedings, the lot of all mortals, if Providence so wills it; but then, had she, after aspiring to the foremost place among the other states, abandoned the attempt, she would have borne the blame of delivering them all over to Philip. For, if she had given up without a struggle all that your forefathers encountered every danger to win, who but would have spurned you, Æschines? Not the country indeed, not me. But what eyes should we have been able to lift up on any strangers coming to Athens, if things

had stood in their present posture, and Philip had been made general and master over all, while others than ourselves had borne the brunt of resisting such a consummation—especially when in past times this country never preferred inglorious ease to the peril of illustrious deeds? For which of the Greeks, which of the barbarians is ignorant, that both from the Thebans and from the Spartans, who bore sway before them, ay, and from the Persian king himself, permission would thankfully and cheerfully have been given to the country to take what she chose, and to keep her own, provided she would only submit to a master, and suffer some other state to head the Greeks? But this was felt neither to be national nor bearable, nor natural to Athenians; nor could any one at any time persuade this country to join powerful wrong-doers, and seek her own safety in slavery. Struggling for supremacy, and power, and glory, and confronting all hazards, she has lived through all ages of her history! And yourselves feel that this is noble and fitting your character, when you extol such conduct in your ancestors, justly. For which of you is not astonished at the virtue of those men, who could submit to leave this country and this city, and embark in their ships rather than bow to a master—choosing Themistocles, the adviser of the measure, for their commander; stoning to death Cyrsilus for recommending submission to tyranny, and not himself only, but your wives stoning his wife? For the Athenians of those days did not go in quest of an orator or a leader, through whom they might enjoy a prosperous slavery; they would not deign to live, if the life of liberty were denied them. Each of them thought that he was born, not for his father and his mother only, but for his country. What then? He who looks upon himself as only made for his parents, awaits his destined end in the course of nature; but he who feels that he is born for his country too, will rather die than see her enslaved, and will account the insults and the disgrace which must needs await the citizens of a conquered state, more frightful than death itself.

If, then, I should take upon me to affirm that it was I who made you entertain sentiments worthy of your forefathers, there lives not the man who could justly blame me. But I am now demonstrating that those measures were your own, and showing that the country had adopted those principles before I did; while, however, I assert that in the execution of each design I too had my share. But Æschines, impeaching my whole conduct, and bidding you hold me cheap as the cause of the country's

alarms and perils, would fain strip me of the credit at this moment, and thus deprive you of the glory ever after. For, if you condemn Ctesiphon, on account of my policy having been wrong, you will be proved to have yourselves done wrong, instead of merely suffering under the dispensations of fortune. But it is not true! It is not true that you have done wrong, men of Athens, in fighting the battle of all Greece for her freedom and salvation! No. By your forefathers, who for that cause rushed upon destruction at Marathon, and by those who stood in battle array at Platæa, and those who fought the sea-fight at Salamis, and by the warriors of Artemisium, and by all the others who now repose in the sepulchres of the nation,—gallant men, and to all of whom, Æschines, the state decreed a public funeral, deeming that they too had earned such honors—not those only who had combated fortunately, and had come off victorious—and with strict justice; for the duty of the brave had been done by all; but what fortune Providence bestows on each, that they had shared. —Demosthenes, *translated by Lord Brougham.*

THE NATURAL SCIENCES.

The term Geology, like most names of sciences, consists of two Greek words, and means *a discourse about the earth.* Just as one cordial friend cheerfully communicates information to another, so will our good friend Geology, if we are really desirous to learn, discourse pleasantly to us about the earth, and tell us all that man has hitherto discovered as to its character and history. It is a mistake to suppose that this science has to do only with the rock masses that occur within the earth; everything upon our globe that is *unorganised,* or without life, whether land or water, earth or rock, metals or fossils, coal or amber, volcanoes or mineral springs, all belong to the science of Geology. You will afterwards learn more fully what are the special objects of this youngest of the natural sciences in its subdivisions of Physical Geography, Mineralogy, and Geology proper.

Although we naturally imagine that man would early turn his attention to the study of Geology, this is not the case. Long before men thought of examining the crust of the earth, they had made themselves familiar with the several objects composing the beautiful mantle of verdure that nature has thrown over its other-

wise bare and uninviting surface. Far away, in the Eastern birthplace of our race, they saw

"The feathery palm-tree rise,
And the date grow ripe under sunny skies;"

or the great banian, the fig-tree of India, sending down roots from his giant branches, and, like a broad, living tent, spreading his cool shade over a circumference of fifteen hundred feet. In more western lands a different sight awaited them; there they beheld the orange groves of Italy, the chestnut forests of Spain, the vine-clad hills of Portugal, the apple orchards of France, and the linden avenues of Germany, with the English oaks, the Scotch firs, and the Norway pines, that adorn the landscapes of these northern countries. Crossing the ocean to the shores of this great Western continent, covered with thick forests of maple and birch, tamarack and balsam trees, what new objects of interest in the plant world must have greeted them! Then, when other distant lands had been explored, and the productions of other climes had been pressed into the service of men for the supply of their luxuries, how interested must they have been in the tea and coffee plants of China and Arabia, the cotton shrub of the East, the scarlet geraniums of the Cape of Good Hope, the variegated fuchsia of Mexico, and the vast variety of shrubs and flowers that please the eye and minister to the wants and enjoyments of man! What a mine of wealth appeared to them in the great family of the grasses, from the gigantic bamboo, sixty feet high, to the delicate meadow grass, six inches in length; and what objects of wonder and admiration in the graceful fern, the velvety moss, the dry lichen, the fleshy mushroom, and the floating seaweed! But the number of these objects of the vegetable world was too vast, too overpowering, for the memory of man. No sooner had he acquired the knowledge of some new plant than the old ones vanished away; and he put to himself the question, "How can I remember all these objects, and distinguish them from one another?" You have, no doubt, already guessed his answer to this self-put question. It was—"By carefully examining the form and structure of every plant; by comparing them with each other; and, finally, by arranging them in groups or classes according to their points of resemblance." And thus the science of Botany was commenced.

Botany is a Greek word, and, in that language, simply means *a plant;* so that the science of Botany is the *system of knowledge*

about plants. What more simple, beautiful, and interesting study could there be than that of Botany? The materials for it are all around us, in fields, and on the road-sides, in woods and gardens; even a vacant town-lot, overgrown with rank weeds, contains sufficient variety to occupy and interest a botanist for whole weeks and months. No country affords greater opportunities for the study of this science than the one we live in; and, among civilized regions, there are very few in which the labors of the botanist will be better rewarded by the discovery of unknown plants, or of interesting particulars regarding those already known.

Plants, however, were not the only, nor, perhaps, the first natural objects that attracted the attention of man. If he were an Egyptian, a worshipper of animals, his were the wary crocodile and the sacred ibis of the muddy Nile. If a Greek, he had no doubt heard the fierce laugh of the hyena in Asia Minor; or fished at Crete for the bee-eater, as the boys do at the present day, with a locust flying from the end of his line; or quarrelled with a friend over the changing hues of the chameleon in Greece or Sicily. If a Roman, he had seen, in the cruel games of the amphitheatre, elephants, lions, and panthers slaughtered for the amusement of the people. Whatever his country may have been, at whatever time he lived, whether an ancient patriarch or a modern farmer, he was perfectly at home among the domestic animals, and had, no doubt, also marked the deer in the forest, the fish in the river, the croaking frog in the swamp, and the busy insect flitting through the air or creeping on the ground. If he were a man of inquiring mind, he would be anxious to learn what forms of animal life other lands had to exhibit, to compare them with those of his own country, and thus to find, little by little, all the links in that wondrous chain which leads from the minute animalcule, of which the point of a needle will crush a thousand, to man himself, the noblest work of the Creator.

The man who thus observed the habits and peculiarities of the animal kingdom, who sought to accumulate information regarding its different members, and who classed them together in accordance with their manifest points of resemblance, would be called a student of Natural History; but he would, at the same time, be a builder up of the science of Zoology. As *ge* in Geology means *the earth,* so the word *zoon* is the Greek for *an animal,* and Zoology is thus *a discourse about animals.* This study, above all others, is that in which young people take

especial delight, and it is also one to which have been devoted the life-labors of some of the greatest minds that the world has produced.

We have now surveyed three of the Natural Sciences, embracing the mineral, vegetable, and animal kingdoms. You will be ready to say, "Surely we have exhausted the world of Nature; what is there that is not included in those three sciences of Geology, Botany, and Zoology?" Not so fast, dear reader. Have we not an atmosphere around us, invisible it may be, yet in which we live and breathe? Are there no clouds in the heavens, no dew on the grass? Are there no long rainy days and months of ice and snow? Do not the cold March winds chill us with their keen blast, and the summer breezes fan our flushed cheeks with their cool and gentle motion? Then, have we not watched the coming of the fierce tempest, heard the rumbling of the thunder, and seen the vivid lightning flash across the sky? We have seen, too, the beautiful arch of the rainbow by day, and the fiery meteor at night; and, in books, we have read about the great ice mountains of the North, the waterspouts that, uniting the clouds above to the sea beneath, break with fatal violence in the Southern Ocean; with many other strange sights and sounds that take place in the unseen body around us. All these are well worthy, not only of observation, but of diligent and accurate investigation; therefore they have a science to themselves, and that science is called Meteorology.

Meteorology is a Greek word, made up of *meteora*, meaning *things in the air*, and *logos*, a discourse—a *discourse about things in the air*. Learned men, masters of this science, are employed by many governments to observe the state of the atmosphere, and to keep a record of all that occurs in it from year to year; for this purpose, they are furnished with a suitable building, generally situated on a rising ground, and having a tower of some height upon it, whence they may be able to detect the appearance of anything in the air, whether it be watery like snow and rain, airy like wind, or fiery as falling stars. Such a building is called an *observatory*, and is also sometimes used for making astronomical observations; the most celebrated one is that of Greenwich, near London in England.

So far then, we have four sciences brought before us; discourses about plants and animals, about the earth and things in the air. Is there any natural object upon this earth which is not included in the four sciences that treat of these several depart-

ments of Nature? No, there is nothing more, but yet there is another science. We examine a piece of rock, the leaf of a tree, the leg of a frog, and a handful of snow, and we put the question, What are all these things made of? Now, this seems a very strange question; if you were asked, you would, perhaps, answer, that the rock was made of some kind of stone, and the leaf of delicate fibres and cells, the frog's leg of flesh and bones, and the snow of frozen water; and you would expect the person who put the question to smile approvingly and say, "Your reply is quite correct." But I very much fear that such an answer would not satisfy a chemist; he would desire to go deeper into the matter, and would, probably, ask you, what stone and fibres, flesh and bones and water are composed of. To say that rock is stone is as much an explanation as to say that a house is a domicile, and that a leaf is made up of fibres and cells, as that a house is made up of rooms. But if you were asked what a house were made of, you would reply, "Of brick, or stone, and mortar," or "of wood," as the case might be. Now, just such an answer as this is what the chemist requires to his question. He would tell you that the stone, suppose it were limestone, was composed of a certain number of parts of lime and carbonic acid, and so on with the rest. Again, he would inform you that lime is made up of so many atoms or small particles of a metal called calcium, and a gas called oxygen; and carbonic acid, of similar atoms of oxygen, and another substance, denominated carbon. But calcium, oxygen, and carbon cannot be reduced to anything lower; they are the bricks and mortar that make the house, and all that went before them were only the rooms. These three bodies, or substances, are named *elements* or *elementary substances*, because they are not composed of anything more simple. The elementary bodies are about sixty-three in number, and of these sixty-three elements everything in the world is made up, whether it belong to the mineral or vegetable, the animal or the aerial kingdom. It is with these simple bodies that the chemist works, building up or taking to pieces, room by room, and brick by brick, the materials of which the earth and everything in it is composed; and the science which teaches the one and explains the other is called Chemistry.

The term Chemistry is very like one of the simple bodies which the science investigates, for its origin is very obscure, and the Greek word *chemeia*, from which it is thought to be derived, has no simpler meaning. However, it is supposed by some that

it comes from the Greek *chymicos*, equivalent to what is said *concerning a thing extracted;* so that, with this explanation, chemistry would be *the system of knowledge about things extracted.* Since *to extract* has the meaning of *to draw out*, you will easily perceive that it is applicable to the science which draws forth the simple elements that make up a compound body. Of all the sciences, none is so practically useful as that of chemistry, the laws of which are found to govern most of the simplest as well as the most important operations of man upon natural objects.

We have now found out what are the five natural sciences, under which everything in the world, whether simple or compound, may be ranked. If you would be well-informed men and women, you should gain some knowledge of each of these. To all right-minded persons they will prove an endless source of amusement, as well as of profit, stimulating legitimate curiosity, encouraging habits of observation, and increasing reverence for Him who in wisdom has made all the objects of which they treat.

The Natural Sciences are—

1. Geology.
2. Botany.
3. Zoology.
4. Meteorology.
5. Chemistry.

—*Campbell's Fifth Read r.*

GEOLOGY.

Geology, from two Greek words—*ge*, the earth, and *logos*, a discourse or reasoning—embraces, in its widest sense, all that can be known of the constitution and history of our globe. Its object is to examine the various materials of which our planet is composed, to describe their appearance and relative positions, to investigate their nature and mode of formation, and generally to discover the laws which seem to regulate their arrangement.

As a department of natural science, Geology confines itself more especially to a consideration of the mineral or rocky constituents of the earth, and leaves its surface configuration to Geography, its vegetable life to Botany, its animal life to Zoology, and the elementary constitution of bodies to the science of Chemistry. Being unable to penetrate beyond a few thousand feet into the solid substance of the globe, the labors of geologists are necessarily confined to its exterior shell or crust; hence we

speak of the "crust of the globe," meaning thereby that portion of the rocky structure accessible to human investigation.

RAILWAY CUTTING SHOWING STRATA.

The materials composing this crust are rocks or minerals of various kinds—as granite, basalt, roofing-slate, sandstone, marble, coal, chalk, clay, and sand—some hard and compact, others soft and incohering. These substances do not occur indiscriminately in every part of the world, nor, when found, do they always appear in the same position. Granite, for example, may exist in one district of a country, marble in another, coal in a third, and chalk in a fourth. Some of these rocks occur in regular layers or courses, termed *strata*, from the Latin word *stratum*, strewn or spread out, while others rise up in irregular mountain-masses. It is evident that substances differing so widely in composition and structure must have been formed under different circumstances and by different causes; and it becomes the task of the geologist to discover those causes, and thus infer the general conditions of the regions in which, and of the periods when, such rock substances were produced.

When we sink a well, for example, and dig through certain clays, sands, and gravels, and find them succeeding each other in layers, we are instantly reminded of the operations of water,

seeing it is only by such agency that accumulations of clay, sand, and gravel are formed at the present day. We are thus led to inquire as to the origin of the materials through which we dig, and to discover whether they were originally deposited in river-courses, in lakes, in estuaries, or along the sea-shore. In our investigation we may also detect shells, bones, and fragments of plants imbedded in the clays and sands; and thus we have a further clue to the history of the strata through which we pass, according as the shells and bones are the remains of animals that lived in fresh-water lakes and rivers, or inhabited the waters of the ocean. Again, in making a railway-cutting, excavating a tunnel, or sinking a coal-pit, we may pass through many successions of strata—such as clay, sandstone, coal, ironstone, limestone, and the like; and each succession of strata may contain the remains or impressions of different plants and animals. Such differences can only be accounted for by supposing each stratum or set of strata to have been formed by different agencies, and under different conditions of climate, as well as under different arrangements of sea and land, just as at the present day the rivers, estuaries, and seas of different countries are characterized by their own special accumulations, and by the imbedded remains of the plants and animals peculiar to these regions.

In making these investigations, the geologist is guided by his knowledge of what is now taking place on the surface of the globe—ascribing similar results to similar or analogous causes. Thus, in the present day, we see rivers carrying down sand and mud and gravel, and depositing them in layers either in lakes, in estuaries, or along the bottom of the ocean. By this process many lakes and estuaries have, within a comparatively recent period, been filled up and converted into dry land. We see also the tides and waves wasting away the sea-cliffs in one district, and accumulating expanses of sand and salt-marsh in some sheltered locality. By this agency thousands of acres of land have been washed away and covered by the sea, even within the memory of man; while, by the same means, new tracts have been formed in districts formerly covered by the tides and waves. Further, we learn that, during earthquake convulsions, large districts of country have sunk beneath the waters of the ocean; while in other regions the sea bottom has been elevated into dry land. Volcanic action is also sensibly affecting the surface of the globe—converting level tracts into mountain ridges, throwing up new islands from the sea, and casting forth molten lava and

other materials, which in time become hard and consolidated rock-masses.

As these and other agents are at present modifying the surface of the globe, and changing the relative positions of sea and land, so in all time past have they exerted a similar influence, and have necessarily been the main agents employed in the formation of the rocky crust which it is the province of Geology to investigate. Not a foot of the land we now inhabit but has been repeatedly under the ocean, and the bed of the ocean has formed as repeatedly the habitable dry land. No matter how far inland, or at what elevation above the sea, we now find accumulations of sand and gravel—no matter at what depth we now discover strata of sandstone or limestone—we know, from their composition and arrangement, that they must have been formed under water, and brought together by the operation of water, just as layers of sand and gravel and mud are accumulated or deposited at the present day. And as earthquakes and volcanoes break up, elevate, and derange the present dry land, so must the fractures, derangements, and upheavals among the strata of the rocky crust be ascribed to the operation of similar agents in remote and distant epochs.

By the study of existing operations, we thus get a clew to the history of the globe; and the task is rendered much more certain by an examination of the plants and animals found imbedded in the various strata. At present, shells, fishes, and other animals are buried in the mud or *silt* of lakes and estuaries; rivers also carry down the remains of land-animals, the trunks of trees, and other vegetable drift; and earthquakes submerge plains and islands, with all their vegetable and animal inhabitants. These remains become enveloped in the layers of mud and sand and gravel formed by the waters, and in process of time are *petrified* (*petra*, a stone, and *fio*, I become); that is, are converted into stony matter, like the shells and bones found in the deepest strata. Now, as at present, so in all former time must the remains of plants and animals have been similarly preserved; and as one tribe of plants is peculiar to the dry plain, and another to the swampy morass—as one family belongs to a temperate, and another to a tropical region—so, from the character of the imbedded plants, we are enabled to arrive at some knowledge of the conditions under which they flourished. In the same manner with animals: each tribe has its locality assigned it by peculiarities of food, climate, and the like; and by comparing *fossil* remains (fossil, from *fossus*, dug up, applied to all remains

of plants and animals imbedded in the rocky crust) with existing races, we are enabled to determine many of the past conditions of the world with considerable certainty.

By examining, noting, and comparing, as indicated in the preceding paragraphs, the geologist finds that the strata composing the earth's crust can be arranged in series; that one set or series always underlies, and is succeeded by another set; and that each series contains the remains of plants and animals not to be found in any other series. Having ascertained the existence of such a sequence among the rocky strata, his next task is to determine that sequence in point of time—that is, to determine the older from the newer series of strata; to ascertain, if possible, the nature of the plants and animals whose remains are imbedded in each set; and, lastly, to discover the geographical range or extent of the successive series. These series he calls *formations*, as having been formed during different arrangements of sea and land, and under the varying influences of climate and other external conditions; and it is by a knowledge of these that the geologist is enabled to arrive at something like a history of the globe—imperfect, it may be, but still sufficient to show the numerous changes its surface has undergone, and the varied and wonderful races of plants and animals by which it has been successively inhabited. To map out the various mutations of sea and land, from the present moment to the earliest time of which we have any traces in the rocky strata: to restore the forms of extinct plants and animals; to indicate their habits, the climate and conditions under which they grew and lived—to do all this, and trace their connection up to existing races, would be the triumph, as it is now the aim, of all true geology. —PAGE.

Rocks as to their origin are—

1. *Sedimentary or Aqueous,* formed by the agency of water and deposited in regular strata; these rocks are either ..... { *Inorganic,* as Sandstone. *Organic,* as Coal, Shell-marl, &c.
2. *Metamorphic or Changed Rocks:* originally Sedimentary, but become crystallized by the action of heat; such are gneiss, marble, &c.
3. *Eruptive;* never occur in strata but in irregular masses; when appearing on the surface are called *Volcanic;* such are granite, lava, pumice, &c.

END OF THE PELOPONNESIAN WAR.

(B.C. 404.)

NUMEROUS Grecian colonies had settled in Sicily, and had risen to great wealth and power; they were almost all democracies, but tyrants occasionally ruled them. Syracuse was the most distinguished of these cities. Gelon had possessed himself of the tyranny, and governed with justice and mildness. After his death the people fell into divisions, and the smaller cities which were oppressed applied to Athens for help. Alcibiades, who was then in the plenitude of his influence, warmly exhorted the people to respond to the call, and drew a brilliant picture of the glorious prospect of universal empire that now seemed destined for Athens. In an evil hour the people, though warned by Nicias, and other men of age and experience, yielded their assent, and an expedition against Syracuse was decreed. The finest fleet that ever left Athens sailed under the command of Alcibiades, Nicias, and Lamachus, and success at first attended its operations; but the enemies of Alcibiades accused him of profaning the mysteries, and he was recalled, and fled to Sparta. A Spartan general, Gylippus, was despatched to Syracuse, and though the Athenians augmented their army in Sicily to 40,000 men, and sent out Demosthenes, their ablest general, it was defeated, and men and generals lost their life or liberty.

The news of this misfortune was at first not credited at Athens. When its truth was confirmed, the people looked around and saw themselves without horse, or heavy infantry, or ships; with an empty treasury; their subjects in rebellion; their allies fallen off; the enemy in their country and before their port; yet they lost not courage, but vigorously prepared for defence. The Lacedemonians, by the advice of Alcibiades, instead of making annual incursions into Attica, had taken and fortified Decelia, a post half-way between Athens and Bœotia, and from thence wasted the country. Still the Athenians held out for seven years, and but for the party-spirit that prevailed, which drove Alcibiades again into exile, and unjustly put to death most of their other good generals, they might have come off victorious in the struggle. The vanity and inexperience of the Athenian commanders (warned in vain by Alcibiades) gave a decisive victory to the Lacedemonian Lysander, at the river Ægos, and the last hope of Athens, her renewed fleet, was lost. Lysander soon ap-

peared in the Piræus; the people made a gallant resistance, but hunger compelled them to sue for peace. The Thebans and Corinthians insisted that the city should be burnt, and the inhabitants reduced to slavery. The Lacedemonians declared they would never submit to the destruction of a city which had merited so well of Greece. But, to cramp her power effectually, she was allowed to possess but twelve ships. The *Long Legs*—the walls between the city and the Piræus—were broken down, and the government placed in the hands of an oligarchy of thirty persons.

Thus ended the Peloponnesian war, after a continuance of twenty-seven years, and with it the dominion of Athens, in the seventy-fifth year after the battle of Salamis. During that period Athens had acquired another and more lasting empire, of which Lysander could not deprive her. She had become the mistress of Greece in all the arts and sciences that embellish and ennoble life. Poetry, philosophy, architecture, and sculpture, attained, during the time of Athenian sway, an eminence never surpassed.

—KEIGHTLEY.

THE SEA! THE SEA!

THE sea! the sea!
For the light of thy waves we bless thee;
For the foam on thine ancient brow;
For the winds, whose bold wings caress thee,
Old Ocean! we bless thee now!
Oh, welcome thy long-lost minstrelsy;
Thy thousand voices; the wild, the free,
The fresh, cool breeze o'er thy sparkling breast,
The sunlit foam on each billow's crest,
Thy joyous rush up the sounding shore,
Thy song of Freedom for evermore,
And thy glad waves shouting, "Rejoice, Rejoice!"
Old Ocean! welcome thy glorious voice!

The sea! the sea!
We bless thee, we bless thee, Ocean!
Bright goal of our weary track,
With the exile's rapt devotion,
To the home of his love come back.
When gloom lay deep on our fainting hearts;
When the air was dark with the Persian darts;
When the desert rung with the ceaseless war,
And the wish'd-for fountain and palm afar,

In Memory's dreaming—in Fancy's ear,
The chime of thy joyous waves was near,
And the last fond prayer of each troubled night
Was for thee and thine islands of love and light.

The sea! the sea!
Sing on thy majestic pæan;
Leap up in the Delian's smiles;
We will dream of the blue Ægean—
Of the breath of Ionia's isles;
Of the hunter's shout through the Thracian woods;
Of the shepherd's song by the Dorian floods;
Of the Naiad springing by Attic fount;
Of the Satyr's dance by the Cretan mount;
Of the sun-bright gardens—the bending vines,
Our virgins' songs by the flower-hung shrines;
Of the dread Olympian's majestic domes,
Our fathers' graves and our own free homes.

The sea! the sea!
We bless thee, we bless thee, Ocean!
Bright goal of our stormy track,
With the exile's rapt devotion,
To the home of his love come back!

—*The Maple Leaf.*

MINERALOGY.

Natural History is a science which consists of many branches; one, which treats of animals, is called Zoology; another, Botany, teaches the structure and properties of plants; the third, which makes us acquainted with the inorganic portions of our planet, namely, stones or minerals, is called Mineralogy; and if, at first sight, it should appear less attractive or less useful than the other two branches, a very little consideration will prove that it is of equal importance to mankind, and contributes materially to their comfort, wealth, and luxury. From materials found in the interior of the earth we erect our dwellings, we supply ourselves with fuel, we construct numberless tools and machines; and finally, we obtain our most brilliant ornaments.

Some knowledge of many of these substances must have been possessed at a very remote period. The most ancient nations of whom we have any record manufactured arms, and ornaments of gold and silver. The Romans, who made great improvements in the arts of civilization, greatly enlarged this knowledge, bringing

to light many substances previously unknown, and employing them for useful or ornamental purposes; they were acquainted with several of the precious stones, and, with the exception of the diamond, succeeded in cutting and engraving on them.

The elder Pliny, a man of inquiring mind and unwearied diligence in the pursuit of knowledge, collected, from every source within his reach, accounts of all the natural productions that were then known, or of which any description existed in his time, and he added to these his own observations on such as he had actually examined. It is much to be regretted that the latter were not more numerous; for he too often copied, without inquiry, the descriptions he met with, and has transmitted to us a vast number of inaccuracies and absurdities, such as accounts of the magical properties of certain stones, plants, and animals, and charms, by which particular diseases might be cured.

As civilization extended, and the arts of life advanced, a greater number of useful minerals became known; improvements in machinery and practical science led to greater facility in the working of mines, metals were more sought after, new ones were discovered, and new and rich ores of those already known were found to exist, which had formerly been thrown aside as valueless, from ignorance of their nature. Mineralogy now became a subject of importance, and much attention was paid to it; but it still retained somewhat of a vague and unsatisfactory character, from want of knowledge of the principles on which it ought to be based. Chemistry, indeed, lent its aid in the analysis of minerals; but it was before chemistry itself had been raised to the state of an exact science by the wonderful and beautiful law of *definite proportions*, a law which pervades all chemical combinations, whether natural compounds or the result of operations in our laboratories. This law assists us in ascertaining with precision the composition of mineral substances, and consequently in identifying mineral species, and giving them their true place in a scientific classification.

The want of some knowledge of the real nature of stones, which even a slight acquaintance with mineralogy would furnish, has occasioned to many persons, within a comparatively recent period, very ruinous loss: whilst others have rapidly acquired a fortune from profiting, under similar circumstances, by opportunities that had been unseen or totally neglected. It is not above fifty years since a man found in Shropshire a considerable vein of sulphate of baryta, which, in consequence of its weight, he mistook for

white lead ore, and he erected a smelting-house and furnaces for the purpose of reducing it to a metallic state. Another person in the same county, having met with some mica in the form of small silvery scales or spangles, was persuaded that he had found a silver mine, and ruined himself in attempts to obtain the silver.

Among many other unfortunate adventures which have arisen from ignorance of mineralogy, may be mentioned that of a poor man, who was persuaded to lay out a hundred pounds, nearly the whole of some years' economy, in the purchase of a few pieces of white topaz, under the idea that they were diamonds. But independently of the utility of this science, any one who studies natural history for his amusement will be richly rewarded by the wonders and the beauties displayed in the mineral kingdom. The bodies which are the objects of study to the mineralogist comprise the earthy, metallic, saline, and other substances which compose our earth—that is to say, the unorganized part of the creation.

To understand clearly what is meant by the term *unorganized*, let us remember that an animal and a plant are said to be *organized*, because they consist of several different parts, all varying in their form, their position, and their functions; yet all equally necessary to form a perfect animal, or a perfect plant; so that to remove any one of them would be to destroy, or at least to render imperfect, the body to which it belongs. These parts are called *organs;* in animals we find a *stomach* to digest the food they convey to it, and by means of which they are nourished and have life; *nerves* and *muscles* for sensation and motion; in plants we observe a root to fix them to the ground, and absorb nourishment from it, and *vessels* for the circulation of the *sap*.

But in a mineral, in its most perfect state, all the parts exactly resemble each other, so that by breaking it, we diminish it in size, without destroying its existence or its completeness. Take, for example, a flat pebble, or a fragment of limestone from a quarry, and break it; we shall find that each substance is of the same texture and composition throughout. It is true that we may also take up a stone, or break off a piece of rock, which has not this homogeneous structure, as, for instance a granite paving stone; but granite is an aggregate rock, which consists essentially of three simple minerals, each of which may plainly be distinguished on inspection; and mineralogy teaches us to recognize in it—1st, quartz, which usually appears in grayish semi-transparent grains of a somewhat glassy appearance; 2d, felspar, of a reddish

or yellowish white, and opaque; 3d, mica, in small scales, which have a shining and somewhat metallic lustre.

It is true that the essential difference of minerals consists in their composition; but it is not therefore necessary to subject every mineral to chemical analysis in order to know something of its nature. The difference of composition is manifested in difference of form, structure, color, weight, hardness, transparency, &c.; and an acquaintance with these and some other properties or characters will, in most cases, enable us to recognize a mineral species, and to know of what elementary substances it principally consists. These are called *physical characters.* But it sometimes happens that we meet with a specimen in which these characters are not clearly marked, or some of them may have a great resemblance to those of another species; in such cases we may derive great assistance from an examination of some of the *chemical characters,* by means of acids and the action of the blow-pipe, which have a very different effect on different species.

— VARLEY.

Dana's Classification of Minerals.

Class I. Gases; consisting of, or containing nitrogen or hydrogen, air, &c.
Class II. Water; crystallizes as ice.
Class III. Carbon and compounds of carbon; the diamond, coal, plumbago, amber, &c.
Class IV. Sulphur and its acids.
Class V. Haloid or salt-like minerals; salt, nitre, borax, alum, gypsum, &c.
Class VI. Earthy minerals; quartz, opal, felspar, mica, ruby, emerald, &c.
Class VII. Metals and metallic ores; gold, silver, mercury, iron, lead, copper, &c.

TUBAL CAIN.

OLD Tubal Cain was a man of might,
In the days when earth was young;
By the fierce red light of his furnace bright,
The strokes of his hammer rung:
And he lifted high his brawny hand
On the iron glowing clear,
Till the sparks rush'd out in scarlet showers,
As he fashion'd the sword and spear.
And he sang—"Hurrah for my handiwork!
Hurrah for the spear and sword!
Hurrah for the hand that shall wield them well,
For he shall be king and lord!"

To Tubal Cain came many a one,
  As he wrought by his roaring fire,
And each one pray'd for a strong steel blade,
  As the crown of his desire:
And he made them weapons sharp and strong,
  Till they shouted loud for glee;
And they gave him gifts of pearls and gold,
  And spoils of the forest free.
And they sang—"Hurrah for Tubal Cain,
  Who hath given us strength anew!
Hurrah for the smith, hurrah for the fire,
  And hurrah for the metal true!"

But a sudden change came o'er his heart,
  Ere the setting of the sun;
And Tubal Cain was fill'd with pain
  For the evil he had done:
He saw that men, with rage and hate,
  Made war upon their kind,
That the land was red with the blood they shed,
  In their lust for carnage blind.
And he said, "Alas! that I ever made,
  Or that skill of mine should plan,
The spear and the sword, for men whose joy
  Is to slay their fellow-man!"

And for many a day old Tubal Cain
  Sat brooding o'er his woe;
And his hand forbore to smite the ore,
  And his furnace smoulder'd low.
But he rose at last with a cheerful face,
  And a bright courageous eye,
And bared his strong right arm for work,
  While the quick flames mounted high.
And he sang—"Hurrah for my handiwork!"
  And the red sparks lit the air;
"Not alone for the blade was the bright steel made,"
  And he fashion'd the first ploughshare.

And men, taught wisdom from the past,
  In friendship join'd their hands;
Hung the sword in the hall, the spear on the wall,
  And plough'd the willing lands:
And sang—"Hurrah for Tubal Cain!
  Our staunch good friend is he;
And for the ploughshare and the plough,
  To him our praise shall be.

But while oppression lifts its head,
Or a tyrant would be lord;
Though we may thank him for the plough,
We'll not forget the sword!"

—CHARLES MACKAY.

COPPER MINES OF LAKE SUPERIOR.

To untutored man, provided only with implements of stone, the facilities presented by the great copper regions of Lake Superior for the first step in the knowledge of metallurgy were peculiarly available. The forests that flung their shadows along the shores of that great lake were the haunts of the deer, the beaver, the bear, and other favorite objects of the chase; the rivers and the lake abounded with fish; and the rude hunter had to manufacture weapons and implements out of such materials as nature placed within his reach. The water-worn stone from the beach, patiently ground to an edge, made his axe and tomahawk; by means of which, with the help of fire, he could level the giants of the forest, or detach from them the materials for his canoe and paddle, his lance, club, or bow and arrows. The bones of the deer pointed his spear, or were wrought into fish-hooks; and the shale or flint was chipped and ground into his arrow-head, after a pattern repeated with little variation in all countries, and in every primitive age. But besides such materials of universal occurrence, the primeval occupant of the shores of Lake Superior found there a *stone* possessed of some very peculiar virtues. It could not only be wrought to an edge without liability to fracture, but it was malleable, and could be hammered out into many new and convenient shapes. This was the copper, found in connection with the trappean rocks of that region in inexhaustible quantities, in a pure metallic state. In other rich mineral regions, as in those of Cornwall and Devon, the principal source of this metal is from ores, which require both labor and skill to fit them for economic purposes. But in the veins of the copper region of Lake Superior the native metal occurs in enormous masses, weighing hundreds of tons; and loose blocks of various sizes have been found on the lake shore, or lying detached on the surface in sufficient quantities to supply all the wants of the nomad hunter. These, accordingly, he wrought into chisels and axes, armlets, and personal ornaments of various kinds, without the use of the crucible;

and, indeed, without recognizing any precise distinction between the copper which he mechanically separated from the mass, and the unmalleable stone or flint out of which he had been accustomed to fashion his spear and arrow-heads.

It was in the year 1847 that attention was first directed to such traces of ancient mining operations by the agent of the Minnesota Mining Company. Following up the indications of a continuous depression in the soil, he came at length to a cavern where he found several porcupines had fixed their quarters for hybernation; but detecting evidences of artificial excavation, he proceeded to clear out the accumulated soil, and not only exposed to view a vein of copper, but found in the rubbish numerous stone mauls and hammers of the ancient workmen. Subsequent observation brought to light ancient excavations of great extent, frequently from twenty-five to thirty feet deep, and scattered over an area of several miles. The rubbish taken from these is piled up in mounds alongside, while the trenches have been gradually refilled with the soil and decaying vegetable matter gathered through the long centuries since their desertion; and over all, the giants of the forest have grown, withered, and fallen to decay.

Whatever be the dates of their commencement or desertion, the condition in which some of the ancient works on Lake Superior have been found, when re-opened in later times, is suggestive of peculiar circumstances attending their abandonment. It is inconceivable that the huge mass of copper discovered in the Minnesota mine, resting on its oaken cradle, beneath the accumulations of centuries, was abandoned merely because the workmen, who had overcome the greatest difficulties in its removal, were baffled in the subsequent stages of their operations, and contented themselves by chipping off any accessible projecting point. Well-hammered copper chisels, such as lay alongside of it, and have been repeatedly found in the works, were abundantly sufficient, with the help of stone hammers, to enable them to cut it into portable pieces. If, indeed, the ancient miners were incapable of doing more with their mass of copper in the mine than breaking off a few projections, to what further use could they have turned it when transported to the surface? It weighed upwards of six tons, and measured ten feet long, and three feet wide. The trench, at its greatest depth, was twenty-six feet; while the mass was only eighteen feet from the surface; and in the estimation of the skilled engineer by whom it was first seen, it had been elevated upwards of five feet since it was placed on its oaken

frame. The excavations, to a depth of twenty-six feet, the dislodged copper block, and the framework prepared for elevating the solid mass to the surface, all consistently point to the same workmen. But the mere detachment of a few accessible projecting fragments is too lame and impotent a conclusion of proceedings carried thus far on so different a scale. It indicates rather such results as would follow at the present day, were the barbarian tribes of the North-west to displace the present Minnesota miners, and possess themselves of mineral treasures they are as little capable as ever of turning to any but the most simple uses.

Such evidences, accordingly, while they serve to prove the existence, at some remote period, of a mining population in the copper regions of Lake Superior, seem also to indicate that their labors had come to an abrupt termination. Whether by some terrible devastating pestilence, like that which nearly exterminated the native population of New England immediately before the landing of the Pilgrim Fathers, or by the breaking out of war, or, as seems not less probable, by the invasion of the mineral region by a barbarian race, ignorant of all the arts of the ancient mound-builders of the Mississippi, and of the miners of Lake Superior—certain it is that the works have been abandoned, leaving the quarried metal, the laboriously wrought hammers, and the ingenious copper tools, just as they may have been left when the shadows of the evening told their long-forgotten owners that the labors of the day were at an end, but for which they never returned. Nor during the centuries which have elapsed since the forest reclaimed the deserted trenches for its own does any trace seem to indicate that a native population again sought to avail itself of their mineral treasures, beyond the manufacture of such scattered fragments as lay upon the surface. —Dr. D. Wilson.

THE DEFENCE OF THE BRIDGE AGAINST THE TUSCAN ARMY.

Now the Consul's brow was sad;
And the Consul's speech was low,
And darkly look'd he at the wall,
And darkly at the foe.
"Their van will be upon us
Before the bridge goes down;
And if they once may win the bridge,
What hope to save the town?"

Then out spake brave Horatius,
The captain of the gate—
"To every man upon this earth
Death cometh soon or late.
And how can man die better
Than facing fearful odds,
For the ashes of his fathers,
And the temple of his gods?

. . . .

"Hew down the bridge, Sir Consul,
With all the speed ye may;
I, with two more to help me,
Will hold the foe in play.
In yon strait path a thousand
May well be stopp'd by three;
Now who will stand on either hand,
And keep the bridge with me?"

Then out spake Spurius Lartius,
A Ramnian proud was he,
"Lo, I will stand at thy right hand,
And keep the bridge with thee."
And out spake strong Herminius,
Of Titian blood was he,
"I will abide on thy left side,
And keep the bridge with thee."

"Horatius," quoth the Consul,
"As thou sayest, so let it be."
And straight against that great array
Forth went the dauntless three.
For Romans in Rome's quarrel
Spared neither land nor gold,
Nor son, nor wife, nor limb, nor life,
In the brave days of old.

. . . . .

Now, while the three were tightening
Their harness on their backs,
The Consul was the foremost man
To take in hand an axe;
And fathers mix'd with commons,
Seized hatchet, bar, and crow,
And smote upon the planks above,
And loosed the props below.

Meanwhile the Tuscan army,
Right glorious to behold,
Came flashing back the noonday light,
Rank behind rank, like surges bright
Of a broad sea of gold.
Four hundred trumpets sounded
A peal of warlike glee,
As that great host, with measured tread,
And spears advanced, and ensigns spread,
Roll'd slowly toward the bridge's head,
Where stood the dauntless three.

The three stood calm and silent,
And look'd upon the foes,
And a great shout of laughter
From all the vanguard rose.
And forth three chiefs came spurring
Before that deep array;
To earth they sprang, their swords they drew,
And lifted high their shields, and flew
To win the narrow way.

. . . . .

Stout Lartius hurl'd down Aunus
Into the stream beneath;
Herminius struck at Seius,
And clove him to the teeth.
At Picus brave Horatius
Darted one fiery thrust,
And the proud Umbrian's gilded arms
Clash'd in the bloody dust.

. . . . .

But hark, the cry is Astur!
And lo! the ranks divide;
And the great lord of Luna
Comes with his stately stride.
Upon his ample shoulders
Clangs loud the fourfold shield,
And in his hand he shakes the brand
Which none but he can wield.

He smiled on those bold Romans,
A smile serene and high;
He eyed the flinching Tuscans,
And scorn was in his eye.
Quoth he, "The she-wolf's litter
Stand savagely at bay:
But will ye dare to follow
If Astur clears the way?"

Then, whirling up his broadsword
With both hands to the height,
He rush'd against Horatius,
And smote with all his might.
With shield and blade Horatius
Right deftly turn'd the blow;
The blow, though turn'd, came yet too nigh,
It miss'd his helm, but gash'd his thigh:
The Tuscans raised a joyful cry,
To see the red blood flow.

He reel'd, and on Herminius
He lean'd one breathing space;
Then, like a wild-cat mad with wounds,
Sprang right at Astur's face.
Through teeth, and skull, and helmet,
So fierce a thrust he sped,
The good sword stood a hand-breadth out
Behind the Tuscan's head.

And the great lord of Luna
Fell at that deadly stroke,
As falls on Mount Alvernus
A thunder-smitten oak.
Far o'er the crushing forest
The giant arms lie spread;
And the pale augurs, muttering low,
Gaze on the blasted head.

. . . .

But meanwhile axe and lever
Have manfully been plied;
And now the bridge hangs tottering
Above the boiling tide.
"Come back, come back, Horatius!"
Loud cried the fathers all,
"Back Lartius! back Herminius!
Back, ere the ruin fall!"

Back darted Spurius Lartius;
Herminius darted back;
And, as they pass'd, beneath their feet
They felt the timbers crack.
But when they turn'd their faces,
And on the further shore
Saw brave Horatius stand alone,
They would have cross'd once more.

But with a crash like thunder
Fell every loosen'd beam,
And, like a dam, the mighty wreck
Lay right athwart the stream.
And a long shout of triumph
Rose from the walls of Rome,
As to the highest turret tops
Was splash'd the yellow foam.

. . . .

Alone stood brave Horatius,
But constant still in mind;
Thrice thirty thousand foes before,
And the broad flood behind.
"Down with him!" cried false Sextus,
With a smile on his pale face.
"Now yield thee," cried Lars Porsena,
"Now yield thee to our grace."

Round turn'd he, as not deigning
Those craven ranks to see;
Nought spake he to Lars Porsena,
To Sextus nought spake he;
But he saw on Palatinus
The white porch of his home;
And he spake to the noble river
That rolls by the towers of Rome.

"O Tiber! father Tiber!
To whom the Romans pray,
A Roman's life, a Roman's arms,
Take thou in charge this day!"
So he spake, and speaking, sheath'd
The good sword by his side,
And, with the harness on his back,
Plunged headlong in the tide.

No sound of joy or sorrow
Was heard from either bank;

But friends and foes in dumb surprise,
With parted lips and straining eyes,
Stood gazing where he sank.
And when above the surges
They saw his crest appear,
All Rome sent forth a rapturous cry,
And even the ranks of Tuscany
Could scarce forbear to cheer.

But fiercely ran the current,
Swollen high by months of rain,
And fast his blood was flowing,
And he was sore in pain,
And heavy with his armor,
And spent with changing blows;
And oft they thought him sinking,
But still again he rose.

Never, I ween, did swimmer
In such an evil case,
Struggle through such a raging flood
Safe to the landing-place.
But his limbs were borne up bravely
By the brave heart within,
And our good father Tiber
Bore bravely up his chin.

And now he feels the bottom:
Now on dry earth he stands;
Now round him throng the fathers
To press his gory hands.
And now, with shouts and clapping,
And noise of weeping loud,
He enters through the river-gate,
Borne by the joyous crowd.

—Macaulay.

NATURE IN MOTION.

The Mammalia do not roam and rove so much as the lighter birds and favored fishes; they are generally bound to certain localities, and, at all events, chained to the soil. Still we find among them also travellers, now driven forth by hunger, and now by an overwhelming number of beasts of prey, to seek new pastures and new dwelling-places. Others, again, follow man in his migrations over the globe, and thus spread from country to country. To the former belong the horses which now roam wild on the plains of South America, and travel at times thousands of miles. The wild asses, also, in the wilderness, "which stand up in the high places, and snuff the wind like dragons," travel in bands of two or three hundred, and leave, in winter, the tropics for a still warmer region in the south of Africa. They are called "the Bushman's harvest," for the wild Bushman hunts and consumes what has been left by the royal lion and the hungry vulture, who follow them in their march, and feast upon them for a season. Gazelles and antelopes migrate in like manner; and even huge elephants are seen wandering in large herds over the boundless plains of Africa. The shaggy buffalo roams in vast numbers over the prairies of the American continent, and migrates at regular intervals from the north to the south, and from the plain to the mountain. Salt springs are with them the great centre of

attraction ; but generally their movements seem to be regulated by the state of their pastures. As soon as a fire has spread over a prairie, and is succeeded by a fine growth of tender grass, immense herds are sure to appear. How they discover that their table is spread we know not ; it has been surmised that stragglers from the main body, who have wandered away when food became scarce, may first notice the new growth, and by some mysterious means communicate the good news to their hungry brethren. Monkeys also wander from land to land when driven by hunger or fierce enemies; they have even been suspected of passing through a tunnel under the Straits of Gibraltar, from Africa to Europe. Their mode of crossing rivers is a beautiful evidence of their ingenuity and instinct. A powerful male seizes a branch that projects over the banks of the stream, and suspends himself by his prehensile tail ; another takes hold of him, and so on until they have a row as long as the river is wide. Then they begin to swing the living chain, and continue until the impetus is powerful enough to enable the last one to take hold of a tree on the opposite shore. Over this strange bridge the whole host passes safely ; as soon as they are across, the first monkey lets go his hold, the chain swings again, and so they all safely get over large rivers.

The so-called domestic animals travel exclusively by the agency of man and in his company. It is thus that the horse, a native of the rude steppes of Central Asia, which was not known in America before the arrival of the Spaniards, now roams over it in vast herds from Hudson's Bay to Cape Horn. To man we owe it that the goat climbs our rocky mountains, and white woolly sheep graze on scanty mountain sides, whilst the heavier, slower cattle fatten on rich low grounds, and remind us, in the far backwoods, by the sweet harmonies of their bells, of the neighborhood of men. But here, also, the weeds have come with the good plants. Thus the domestic rat, a native of the Old World, was carried in ships to the Cape, to Mauritius and Bourbon, to the Antilles and Bermuda. An Antwerp ship brought them in 1544 first to America, where they astonished the good Peruvians so much that they obtained with them the name of " things that came out of the sea." Now they are rarer in Europe than in America.

The importance of the useful domestic animals cannot be overrated. The very existence of man is bound up with the horse, the ox, and the sheep. Brazil lives almost exclusively by means

of her horses and her cattle; and Australia has developed her resources and progressed in civilization only since sheep have been introduced. It is strange, surely, that like all the best gifts in the vegetable world, (the cerealia), so these domestic animals also are presents which the East has sent to the West, and for which no return has been made. Here, also, an invisible but insurmountable barrier seems to prevent such an exchange.

—*Putman's Magazine.*

BEAUTY OF INSECTS.

Observe the insect race, ordain'd to keep
The lazy sabbath of a half-year's sleep.
Entomb'd beneath the filmy web they lie,
And wait the influence of a kinder sky.
When vernal sunbeams pierce their dark retreat,
The heaving tomb distends with vital heat;
The full-form'd brood, impatient of their cell,
Start from their trance, and burst their silken shell.
Trembling a while they stand, and scarcely dare
To launch at once upon the untried air.
At length assured, they catch the favoring gale,
And leave their sordid spoils, and high in ether sail.
Lo! the bright train their radiant wings unfold,
With silver fringed, and freckled o'er with gold;
On the gay bosom of some fragrant flower,
They, idly fluttering, live their little hour;
Their life all pleasure, and their task all play,
All spring their age, and sunshine all their day.
Not so the child of sorrow, wretched man:
His course with toil concludes, with pain began,
That his high destiny he might discern,
And in misfortune's school this lesson learn—
Pleasure 's the portion of the inferior kind;
But glory, virtue, Heaven for man design'd.

What atom forms of insect life appear!
And who can follow nature's pencil here?
Their wings with azure, green, and purple gloss'd,
Studded with color'd eyes, with gems emboss'd,
Inlaid with pearl, and mark'd with various stains
Of lively crimson, through their dusky veins.
Some shoot like living stars athwart the night,
And scatter from their wings a vivid light,
To guide the Indian to his tawny loves,
As through the woods with cautious step he moves.

See the proud giant of the beetle race,
With shining arms his polish'd limbs enchase!
Like some stern warrior formidably bright,
His steely sides reflect a gleaming light;
On his large forehead spreading horns he wears,
And high in air the branching antlers bears;
O'er many an inch extends his wide domain,
And his rich treasury swells with hoarded grain.

—Mrs Barbauld.

HANNIBAL.

(B.C. 247–183.)

Twice in history has there been witnessed the struggle of the highest individual genius against the resources and institutions of a great nation, and in both cases the nation has been victorious. For seventeen years Hannibal strove against Rome; for sixteen years Napoleon Bonaparte strove against England: the efforts of the first ended in Zama, those of the second, in Waterloo.

True it is, as Polybius has said, that Hannibal was supported by the zealous exertions of Carthage; and the strength of the opposition to his policy has been very possibly exaggerated by the Roman writers. But the zeal of his country in the contest, as Polybius himself remarks in another place, was itself the work of his family. Never did great men more show themselves the living spirit of a nation than Hamilcar, and Hasdrubal, and Hannibal, during a period of nearly fifty years, approved themselves to be to Carthage. It is not, then, merely through our ignorance of the internal state of Carthage, that Hannibal stands so prominent in all our conceptions of the second Punic war; he was really its moving and directing power; and the energy of his country was but a light reflected from his own. History, therefore, gathers itself into his single person; in that vast tempest, which from north and south, from the west and the east, broke upon Italy, we see nothing but Hannibal.

But if Hannibal's genius may be likened to the Homeric god who, in his hatred of the Trojans, rises from the deep to rally the fainting Greeks, and to lead them against the enemy; so the calm courage with which Hector met his more than human adversary in his country's cause, is no unworthy image of the unyielding magnanimity displayed by the aristocracy of Rome.

As Hannibal utterly eclipses Carthage, so, on the contrary, Fabius, Marcellus, Claudius Nero, even Scipio himself, are as nothing when compared to the spirit, and wisdom, and power of Rome. The senate which voted its thanks to its political enemy Varro, after his disastrous defeat, "because he had not despaired of the Commonwealth," and which disdained either to solicit, or to reprove, or to threaten, or in any way to notice the twelve colonies which had refused their accustomed supplies of men for the army, is far more to be honored than the conqueror of Zama. This we should the more carefully bear in mind, because our tendency is to admire individual greatness far more than national; and as no single Roman will bear comparison with Hannibal, we are apt to murmur at the event of the contest, and to think that the victory was awarded to the least worthy of the combatants. On the contrary, never was the wisdom of God's providence more manifest than in the issue of the struggle between Rome and Carthage. It was clearly for the good of mankind that Hannibal should be conquered: his triumph would have stopped the progress of the world. For great men can only act permanently by forming great nations; and no one man, even though it were Hannibal himself, can in one generation effect such a work. But where the nation has been merely enkindled for a while by a great man's spirit, the light passes away with him who communicated it; and the nation, when he is gone, is like a dead body, to which magic power had for a moment given an unnatural life: when the charm has ceased, the body is cold and stiff as before. He who grieves over the battle of Zama, should carry on his thoughts to a period thirty years later, when Hannibal must, in the course of nature, have been dead, and consider how the isolated Phœnician city of Carthage was fitted to receive and to consolidate the civilization of Greece, or by its laws and institutions to bind together barbarians of every race and language into an organized empire, and prepare them for becoming, when that empire was dissolved, the free members of the commonwealth of Christian Europe. —Arnold.

VERRES DENOUNCED.

An opinion has long prevailed, fathers, that in public prosecutions men of wealth, however clearly convicted, are always safe.

This opinion, so injurious to your order, so detrimental to the state, it is now in your power to refute. A man is on trial before you who is rich, and who hopes his riches will compass his acquittal; but whose life and actions are his sufficient condemnation in the eyes of all candid men. I speak of Caius Verres, who, if he now receive not the sentence his crimes deserve, it shall not be through the lack of a criminal, or of a prosecutor; but through the failure of the ministers of justice to do their duty. Passing over the shameful irregularities of his youth, what does the quæstorship of Verres exhibit but one continued scene of villanies? The public treasure squandered, a consul stripped and betrayed, an army deserted and reduced to want, a province robbed, the civil and religious rights of a people trampled on! But his quæstorship in Sicily has crowned his career of wickedness, and completed the lasting monument of his infamy. His decisions have violated all law, all precedent, all right. His extortions from the industrious poor have been beyond computation. Our most faithful allies have been treated as enemies. Roman citizens have, like slaves, been put to death with tortures. Men the most worthy have been condemned and banished without a hearing; while the most atrocious criminals have, with money, purchased exemption from the punishment due to their guilt.

I ask now, Verres, what have you to advance against these charges? Art thou not the tyrant prætor who, at no greater distance than Sicily, within sight of the Italian coast, dared to put to an infamous death, on the cross, that ill-fated and innocent citizen, Publius Gavius Cosanus? And what was his offence? He had declared his intention of appealing to the justice of his country against your brutal persecutions! For this, when about to embark for home, he was seized, brought before you, charged with being a spy, scourged and tortured. In vain did he exclaim: "I am a Roman citizen! I have served under Lucius Pretius, who is now at Panormus, and who will attest my innocence!" Deaf to all remonstrance, remorseless, thirsting for innocent blood, you ordered the savage punishment to be inflicted! While the sacred words, "I am a Roman citizen," were on his lips—words which, in the remotest region, are a passport to protection—you ordered him to death, to a death upon the cross!

O liberty! O sound once delightful to every Roman ear! O sacred privilege of Roman citizenship! once sacred—now

trampled on! Is it come to this? Shall an inferior magistrate, a governor, who holds his whole power of the Roman people, in a Roman province, within sight of Italy, bind, scourge, torture, and put to an infamous death a Roman citizen? Shall neither the cries of innocence expiring in agony, the tears of pitying spectators, the majesty of the Roman commonwealth, nor the fear of the justice of his country, restrain the merciless monster, who, in the confidence of his riches, strikes at the very root of liberty, and sets mankind at defiance? And shall this man escape? Fathers, it must not be! It must not be, unless you would undermine the very foundations of social safety, strangle justice, and call down anarchy, massacre, and ruin on the commonwealth! —CICERO.

COMPOSITION OF SOILS.

SOILS adapted to the growth of plants consist of two principal portions—the organic and the inorganic. The organic portion or *humus*, as it is sometimes called, from a Latin word meaning *moist earth*, consists of the decayed remains of animal and vegetable matter, and varies greatly in quantity in different soils. In peaty soils it forms from 50 to 70 per cent. of the whole weight. In rich and long-cultivated soils, it has been known to amount to 25 per cent.; but in general the proportion is much smaller. Oats and rye will grow on a soil which contains only 1½ per cent. of humus; barley will flourish with only 2 to 3 per cent.; good wheat soils require from 4 to 8 per cent. In stiff clayey soils, from 10 to 12 per cent. have been found.

Now it must not be supposed that a soil is fertile in proportion as it is rich in humus. Humus supplies plants with food in the form of carbonic acid by the roots; dissolved in water, humus acts injuriously; a very small quantity imparts to water a yellow or brown color, a state in which manures cease to be beneficial to cultivated plants, because this coloring matter indicates a deficiency of oxygen to complete the conversion of the humus into carbonic acid. In a soil impregnated with this matter in solution, the roots of plants are deprived of oxygen, without which they cannot exist; for a similar reason, the stagnant water of a marshy soil excludes air; but if the marsh be thoroughly drained, so as to admit the air freely, a fruitful meadow takes its place.

The inorganic portion of the soil consists of two subdivisions, the *soluble saline* portion, from which the plant obtains nearly all the saline ingredients contained in the ash, and the *insoluble earthy* portion, which forms the great bulk of most soils, being rarely less than 95 lbs. in a hundred of their whole weight.

This earthy constituent consists of three main ingredients :— 1, *Silica*, in the form of *sand;* 2, *Alumina*, mixed or combined with sand, as *clay;* and 3, *Lime*, in the form of carbonate, as chalk, limestone, &c. Soils are named according to the proportions in which these three ingredients are mingled together. According to Johnston, 100 grains of dry ordinary soil, containing only 10 of clay, would form a *sandy soil;* if it contained from 10 to 40 grains of clay, it would make a *sandy loam;* from 40 to 70, a *loamy soil;* from 70 to 85, a *clay loam;* from 85 to 95, a *strong clay* fit for making tiles and bricks; if it contain no sand, it would be pure agricultural clay, or pipe-clay. With respect to alumina, it rarely happens that arable land (land fit for the plough) contains more than from 30 to 35 per cent. of that substance. If a soil contain more than 5 per cent. of carbonate of lime, it is called a *marl;* if more than 20 per cent., *a calcareous soil.* Oxide of iron forms 2 or 3 per cent. of sand soils, and in red soils much more.

The sand, lime, clay, oxide of iron, and organic matters mingled in various proportions, give rise to soils of various colors. In chalk districts the soil is white; in the coal-fields the land is black; in the central part of England dark-red soil prevails; in other districts, the prevailing character of the soil is derived from yellow, white, and brown sands and clays.

The subsoil is of variable character; in some places consisting of porous sand or gravel; in others, a light loam; in a third, a stiff clay. On removing the soil we get to the solid rock, such as sandstone, limestone, slate-clay, &c. All kinds of rock by their disintegration will furnish either sandstone, limestone, or clays of different degrees of hardness, or a mixture of two or more of these in different proportions. By the action of winds, rain, and frost, rocks become disintegrated at the surface, seeds get deposited by means of winds, waters, and sometimes animals, and a soil slowly accumulates, partaking necessarily of the chemical character of the rock on which it rests. Thus, on a sandstone rock the soil is sandy; on a claystone, it is more or less a stiff clay; on limestone, it is more or less calcareous; and if the rock be a mixture of these, a similar mixture will be observed in the

soil formed by its crumbling. Geology has furnished the important observation, that if the soil be bad on each of two contiguous rocks, it is generally of better quality at the place where the two rocks meet. Thus, where the plastic clay comes in contact with the top of the chalk, there is much better soil than either on the clay or on the chalk; so also where the chalk and the upper green sand mingle, there are fertile patches celebrated for their wheat crops, in the production of which, the phosphates in the marls are supposed to have an influence. —FOWNES.

CLOTHING FROM ANIMALS—FUR, WOOL, SILK, LEATHER.

IN the hide of an animal, the hair and skin are two entirely distinct things, and must be considered separately as materials for clothing. The hair of quadrupeds differs much in fineness. It is chiefly the smaller species which are provided with those soft, thick, glossy coverings that bear the name of *fur*, and they are found in the greatest perfection where they are most wanted—that is, in the coldest countries. They form indeed the riches of those dreary wastes which produce nothing else for human use. The animals most esteemed for their fur are of the weasel kind: the glutton, the marten, the sable, and the ermine. Fur is used either growing to the skin, or separated from it. In its detached state, it is usually employed in making a stuff called *felt*. The scales of hair are so disposed, that they make no resistance to the finger drawn along the hair from the root to the point, but cause a roughness and resistance in a contrary direction. From this property, hairs, when beaten or pressed together, are disposed to twist round each other, and thus to cohere into a mass. It is in the manufacture of hats that felting is chiefly practised; and the fur used for this purpose is that of the beaver, the rabbit, and the hare.

Wool differs from common hair in being more soft and supple, and more disposed to curl. These properties it owes to a degree of unctuosity, or greasiness, which is with difficulty separated from it. The whole wool, as taken from the animal's body, is called a *fleece*. The first operation this undergoes is that of picking and sorting into the different kinds of wool of which it is composed. These are next cleansed from marks and stains, and

freed from their offensive greasiness. The wool is then delivered to the woolcomber, who, by means of iron-spiked combs, draws out the fibres, smooths and straightens them, separates the refuse, and brings it into a state fit for the spinner. The spinner forms the wool into threads, which are more or less twisted, according to the manufacture for which they are designed; the more twisted forming *worsted*, the looser *yarn*.

The kinds of stuffs made wholly or partly of wool are extremely various; and Great Britain produces more of them, and in general of better quality, than any other country. A more perfect manufacture than our broad cloths, with respect to beauty and utility, cannot easily be conceived. The threads in it are so concealed by a fine nap or down raised on the surface, and curiously smoothed and glossed, that it looks more like a rich texture of nature's forming, than the work of the weaver. Wool, in common with other animal substances, takes a dye better than any vegetable matters. Our cloths are therefore made of every hue that can be desired; but, in order to fit them for the dyer, they are first freed from all greasiness and foulness by the operation of *fulling*, in which the cloths are beaten by heavy mallets as they lie in water, with which a quantity of fuller's earth has been mixed. This earth unites with the greasy matter, and renders it soluble in water, so that, by continually supplying fresh streams while the beating is going on, all the foulness is at length carried off. The operation of fulling has the further effect of thickening the cloth, and rendering it more firm and compact, by mixing the threads with each other, something in the manner of a felt. The cloths of inferior firmness are mostly called narrow cloths. Some of those used for greatcoats, by their substance and shagginess, resemble the original fleece, or rather the fur of a bear, and render unnecessary the use of furred garments. Indeed, with the single material of wool, art has been able much better to suit the different wants of man in his clothing, than can be done by all the productions of nature. What could be so comfortable for our beds as blankets? What so warm and at the same time so light, for pained and palsied limbs, as flannel? The several kinds of the worsted manufacture are excellent for that elasticity which makes them sit close to a part without impeding its motions. This quality is particularly observable in stockings made of worsted. Even the thinnest of the woollen fabrics possess a considerable degree of warmth, as appears in shawls. The real shawls are made of the fine wool of Thibet, in

the eastern part of Asia; but they have been well imitated by the product of some of our English looms. A very different article made of wool, yet equally appropriated to luxury, is carpeting. Upon the whole, Dyer's praise of wool seems to have a just foundation :—

> "Still shall o'er all prevail the shepherd's stores,
> For numerous uses known: none yield such warmth,
> Such beauteous hues receive, so long endure:
> So pliant to the loom, so various,—none."

Men must have been far advanced in the observation of nature before they found out a material for clothing in the labors of a caterpillar. China appears to have been the first country to make use of the web spun by the *silkworm*. This creature, which, in its perfect state, is a kind of moth, is hatched from the egg, in

EGGS—COCOON—CHRYSALIS—CATERPILLAR.

the form of a caterpillar, and passes from that state successively to those of a chrysalis, and of a winged insect. While a caterpillar, it eats voraciously, its proper and favourite food being the leaves of the different species of mulberry. By this diet it is not only nourished, but is enabled to lay up, in receptacles within its body formed for the purpose, a kind of transparent glue, which has the property of hardening as soon as it comes into the air. When arrived at full maturity, it spins itself a web out of this gluey matter, within which it is to lie safe and concealed during its transformation into the helpless and motionless state of a chrysalis.

The silkworm's web is an oval ball, called a cocoon, of a hue varying from light straw color to full yellow, and consisting of a single thread wound round and round, so as to make a close and impenetrable covering. The thread is so very fine, that, when unravelled, it has been measured to 700 or 1000 feet, all rolled within the compass of a pigeon's egg. In a state of nature, the silkworm makes its cocoon upon the mulberry tree itself, where it shines like a golden fruit among the leaves; and in the southern parts of China, and other warm countries of the East, it is still suffered to do so, the cocoons being gathered from the trees without further trouble. But, in even the warmest climates of Europe, the inclemencies of the weather in spring, when the worms are hatched, will not permit the rearing them in the open air. They are kept, therefore, in warm but airy rooms, constructed for the purpose; and are regularly fed with mulberry-leaves till the period of their full growth. As this tree is one of the latest in leafing, silkworms cannot advantageously be reared in cold climates. During their growth, they several times shed their skins, and many die under this operation. At length they become so full of the silky matter, that it gives them a yellowish tinge, and they cease to eat. Twigs are then presented to them upon little stages of wicker-work, on which they immediately begin to form their webs. When the cocoons are finished, a small number, reserved for breeding, are suffered to eat their way out in their butterfly state; the rest are killed in the chrysalis state, by exposing the cocoons to the heat of an oven.

The next business is to wind off the silk. After separating a downy matter from the outside of the cocoons, called *floss*, they are thrown into warm water; and the ends of the threads being found, several are joined together, and wound in a single one, upon a reel. This is the silk in its natural state, called *raw silk*. It next undergoes some operations to cleanse and render it more supple; after which it is made into what is called *organzine*, or *thrown silk*, being twisted into thread of such different degrees of fineness as are wanted in the different manufactures. This is done in a large way by mills of curious construction, which turn at once a vast number of spindles, and perform at the same time the processes of unwinding, twisting, reeling, &c. The largest and most complicated machine for this purpose in England is at Derby, the model of which was clandestinely brought from Italy, where all the branches of the silk manufacture have long flourished.

The excellence of silk as a material for clothing, consists in its strength, lightness, lustre, and readiness in taking dyes. When little known in Europe, it was highly prized for its rarity; it is now esteemed for its real beauty and other valuable qualities. As it can never be produced in great abundance, it must always be a dear article of clothing. The fabrics of silk are very numerous, and almost all devoted to the purposes of show and luxury. In thickness they vary from the finest gauze to velvet, the pile of which renders it as close and warm as fur. Some of the most beautiful of the silk manufactures are the glossy satin; the elegant damask, of which the flowers are of the same hue with the piece, and only show themselves from the difference of shade; the rich brocade, in which flowers of natural colors, or of gold and silver thread, are interwoven; and the infinitely varied ribands. It is also a common material for stockings, gloves, buttons, strings, &c., in which its durability almost compensates for its dearness. Much is used for the purpose of sewing, no other thread approaching it in strength. Silk, in short, bears the same superiority among clothing materials that gold does among metals; it gives an appearance of richness wherever it is employed, and confers a real value. Even the refuse of silk is carefully collected, and serves for useful purposes. The down about the cocoons, and the waste separated in the operations raw silk undergoes, are spun into a coarser thread, of which very serviceable stockings are made; and the interior part of the cocoon is reckoned to be the best material for making artificial flowers.

Whilst the covering of the skins of animals thus affords a valuable material for clothing, the skin itself is not less useful. It requires, however, greater previous preparation. It is necessary to impregnate it with a matter capable of preserving it from putrefaction, and at the same time to keep it in a state of flexibility and suppleness. When this is effected, skin becomes *leather*,—a substance of the highest utility, as well in clothing as for numerous other purposes. The principal operation in the preparation of leather is called *tanning*.

The hide, taken off with due care by the skinner, is first thrown into a pit with water alone, in order to free it from dirt. After lying a day or two, it is placed upon a solid half-cylinder of stone, called a *beam*, where it is cleared of any adhering fat or flesh. It is then put into a pit containing a mixture of lime and water, in which it is kept about a fortnight. The intent of this

is to swell and thicken the hide, and to loosen the hair. Being now replaced upon the beam, the hair is scraped off, and it is next committed to the *mastering-pit*. The contents of this are some animal dung (pigeons' is preferred) and water; and its operation is to reduce that thickening which the lime had given. After this is effected, it is again cleansed on the beam, and is then put into the proper tanning liquor, called the *ooze*, which is an infusion of coarsely-powdered oak-bark in water. The bark of the oak, as well as every other part of it, abounds in a strongly astringent matter, and it is the thorough impregnation with this which preserves the hide from decay or putrefaction. When at length it is thought to have imbibed enough of the astringent matter, the hide is taken out and hung upon a pole to drain, after which it is put upon a piece of wood with a convex surface, called a *horse*, on which it is stretched and kept smooth and even. Finally, it is taken to the *drying-house*, a covered building with apertures for the free admission of air; and it is there hung up till it becomes completely dry; and thus the process of tanning is finished.

From the tanner the hide or skin is consigned to the *currier*, whose art is further necessary in order to make it perfect leather. He first soaks it thoroughly in water, and then places it upon a *beam*, made of hard wood, with one side sloping and polished. He lays it with the grain-side, or that on which the hair grew, inwards, and the flesh-side outwards. He then, with a broad two-edged knife, having a handle at each end, shaves or pares the hide on the latter side, till all its inequalities are removed, and it is reduced to the degree of thinness required for use. After this operation it is again put into water, then scoured and rubbed with a polished stone. It is next besmeared with a kind of oil procured from sheep or deer-skin, or made by boiling train-oil and tallow together, with a view to soften or supple it. A great part of its moisture is then evaporated by hanging it up in a drying-house for some days; and it is further dried by exposure to the sun, or to the heat of a stove. It is then differently treated, according as it is meant to be blacked or stained, or not. Without entering into minute particulars, it is enough to observe, that the astringent principle with which the leather has been impregnated in the tanning renders nothing necessary except the application of a solution of vitriol of iron, at once to strike a good black. This is laid on with a brush, generally on the grain-side of the leather; and it afterwards undergoes the

operation of giving it that roughness which is called the *grain*. This is performed by rubbing it in all directions with a fluted board. When leather is blackened on the flesh-side, the color is given by a mixture of lampblack and oil.

It is in the manner above described that leather is prepared for the making of shoes and boots, which is one of the principal uses of this material; and certainly no other substance could so well unite strength and suppleness with the property of keeping out water. The hides principally used in the shoe-manufacture are those of neat-cattle, or the ox-kind. For the more delicate work, the skins of the goat, dog, seal, and some other animals, are employed. —Dr. Aikin.

TO A WATERFOWL.

Whither, midst falling dew,
While glow the heavens with the last steps of day,
Far through the rosy depths dost thou pursue
Thy solitary way?

Vainly the fowler's eye
Might mark thy distant flight to do thee wrong,
As, darkly painted on the crimson sky,
Thy figure floats along.

Seek'st thou the plashy brink
Of weedy lake, or marge of river wide,
Or where the rocking billows rise and sink
On the chafed ocean side?

There is a power whose care
Teaches thy way along that pathless coast,—
The desert and illimitable air,—
Lone wandering, but not lost.

All day thy wings have fann'd,
At that far height, the cold, thin atmosphere:
Yet stoop not, weary, to the welcome land,
Though the dark night is near.

And soon that toil shall end;
Soon shalt thou find a summer home, and rest,
And scream among thy fellows; reeds shall bend
Soon o'er thy shelter'd nest.

Thou 'rt gone;—the abyss of heaven
Hath swallow'd up thy form; yet on my heart
Deeply hath sunk the lesson thou hast given,
And shall not soon depart.

He who, from zone to zone,
Guides through the boundless sky thy certain flight,
In the long way that I must tread alone,
Will lead my steps aright.

—Bryant.

SNAILS.

We will open the case by claiming for the snails the respect that is always accorded to old and long-established families. There were snails before the Flood—before Adam even—in those far remote eras of the past, when the lower orders of the animal creation had the world all to themselves. The family seems to have "come in" somewhere about the time when the huge Dinotherium wallowed in the rivers of central Europe; and it is not at all improbable that some of the earliest members of it may have banqueted on the self-same herbage which sustained the enormous bulk of that unwieldy monster. Later down, in the classic days of Greece and Rome, the snails were not only known, but held in great repute, and regularly had the honor of appearing at the tables of wealthy epicures, fresh from contact with a silver gridiron. It was in those days, indeed, that the tribe derived the family name by which it has ever since been known—Helix, a spiral, being the name that was given to the dainty morsel; while the same term, metamorphosed into Helicidæ, now stands, all the world over where the science of zoology obtains, as the distinctive appellation of the wide-spread family. All that by the way, however; what we want to impress upon our readers is, that if

there be any honor attached to long descent and distinguished connections, then that honor can fairly be claimed by the snail family.

It may be as well, too, to observe at once, that though the representatives of the family which make themselves at home in our fields and hedges have nothing particularly attractive in their appearance, that is not by any means the case with those branches of the family that reside abroad. In "foreign parts" there are snails to be found as far exceeding our own in delicacy and beauty of coloring, as there are birds and insects that excel in brilliancy the winged tribes of our woods and fields.

But these gaily-colored individuals belong, of course, to the rich pastures and the sunny skies of tropical regions; and we do not mean to call in their aid just yet, in order to make good our position as to the claims of the family. Let us come back, therefore, to the little fellow with the dusky spotted shell, that crawls across our garden path, and to his somewhat prettier companions of the hedgerow. And, now observe, that they make their way in the world by means of an expanded disk or foot, which, as it is in close contact with the ventral region of the body, has procured for the tribe a place amongst the great class of *Gasteropods*, or belly-footed mollusks. The foot itself is a very curious organ, and consists of a nearly uniform mass of muscular fibres, interwoven much in the same way as those of the human tongue. The regular gliding motion with which the common snails crawl along, is due to a pair of muscles extending along the centre of the foot; but in some of the species the surface of the foot is divided by a longitudinal line along the centre, the muscles on the two sides of which act in rotation, and so cause the animals to progress in a perpetual zigzag. The glistening slimy tracks which they leave behind—"the silver slimy trails," as poor Clare calls them—are produced by a discharge of mucus, designed to protect their tender bodies, and smooth the asperities of their way. It must be a very comfortable thing for the snails to be able to carpet their path in this easy, off-hand manner, and we confess we like to see the silvery line on posts and palings, or gravelly walks; but when, as happens sometimes, the little fellows pay us a visit in our parlor, where the place is carpeted beforehand, they might be considerate enough to wipe their feet before coming in.

A good deal of discussion has taken place amongst naturalists, as to whether snails have any eyes or not. The popular notion, of course, is that the little knobs at the extremity of their long

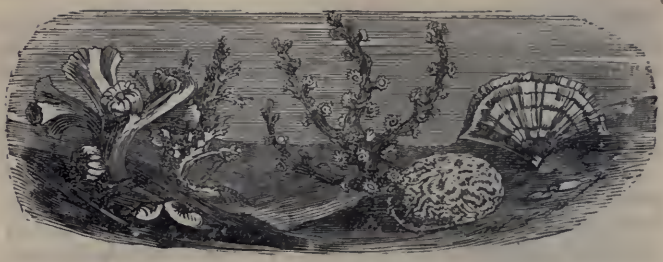
feelers or horns are eyes; and though several writers have questioned or boldly denied the truth of this opinion, it seems to be now pretty generally conceded, that the little club-shaped projections are true visual organs. Swammerdam, indeed, long ago demonstrated the matter to his own satisfaction, and pointed out the five distinct parts of which the eye consists.

It would be a difficult matter, probably, to find a person anywhere who had never seen a snail draw in its horns on their being touched; but how many, we should like to know, have ever closely watched the snail's manner of doing it? The thing is easily seen, and any schoolboy may ascertain how it is done, the next time he stops a snail in his travels across the footpath, and admonishes him in the words of the old doggerel, "to shut up his house and go away home." The secret is, that the *tentacle* or horn is a hollow tube, and in being withdrawn, it is simply inverted and retracted like the finger of a tight glove; only that the extremity, with the eye-spot upon it, is always the first part to disappear. The manner of it is best seen, perhaps, when after the tentacle has been withdrawn, it is again protruded; as you can then readily discern that the organ is lengthened, not by being pushed out from its base, but by gradually unfolding itself; or being everted at the extremity till the clubbed point appears, and the tentacle is fully extended. One cannot but admire the wisdom which thus gives the little mollusk such a ready and effectual means of defending its rather oddly located visual organs. We speak of the wonderful contrivances connected with the human eye, but surely there is something here that is not much less wonderful. —KEARLEY.

THE CORAL INSECT.

TOIL on! toil on! ye ephemeral train,
Who build in the tossing and treacherous main,
Toil on—for the wisdom of man ye mock,
With your sand-based structures and domes of rock;
Your columns the fathomless fountains lave,
And your arches spring up to the crested wave;
Ye 're a puny race, thus boldly to rear
A fabric so vast in a realm so drear.

Ye bind the deep with your secret zone,
The ocean is seal'd, and the surge a stone;
Fresh wreaths from the coral pavement spring,
Like the terraced pride of Assyria's king:



The turf looks green where the breakers roll'd;
O'er the whirlpool ripens the rind of gold;
The sea-snatch'd isle is the home of men,
And mountains exult where the wave hath been.

But why do you plant, 'neath the billows dark,
The wrecking reef for the gallant bark?
There are snares enough on the tented field,
'Mid the blossom'd sweets that the valleys yield;
There are serpents to coil, ere the flowers are up;
There 's a poison-drop in man's purest cup,
There are foes that watch for his cradle-breath,
And why need ye sow the floods with death?

Ye build—ye build—but ye enter not in,
Like the tribes whom the desert devour'd in their sin;
From the land of promise ye fade and die,
Ere its verdure gleams forth on your weary eye;
As the kings of the cloud-crown'd pyramid
Their noteless bones in oblivion hid,
Ye slumber unmark'd 'mid the desolate main,
While the wonder and pride of your works remain.

—Sigourney.

CORAL REEF.

1. Anguillula fluviatilis.
2. Cyclops quadricornis.
3. Actinophrys Sol.
4. Coleps hirtus.
5. Vorticella.
6. Amœba princeps.
7. Acineta mystacina.
8. Oxytricha.
9. Trichithalamus dorsalis.
10. Polyarthra.

LIFE IN A WATER-DROP.

The sun is reflected in the ocean as in the water-drop, and in both are called into existence beings the most varied in size and form. We admire the myriads of creatures which inhabit the depths of the ocean, from the monstrous whale to the tiniest specimen of the finny tribe. But if the size, the power, and the variety of the denizens of the deep excite our admiration, how much more do we find ourselves carried away by that feeling while looking into the water-drop!

Clear and transparent it lies before us: vainly our eye endeavors to discover the least evidence of life, or the smallest creature, in that which seems in itself too small to contain any living object; the breath of our mouth is strong enough to agitate it, and a few rays of the sun are sufficient to convert it into vapor. But we place this drop of water between two clean squares of glass,

beneath the microscope, and lo! what life suddenly presents itself! We scarcely trust our senses. The little drop has expanded into a large plain; wonderful shapes rush backwards and forwards, drawing towards and repulsing each other, or resting placidly and rocking themselves, as if they were cradled on the waves of an extensive sea. These are no delusions; they are real, living creatures, for they play with each other, they rush violently upon one another, they whirl round each other, they free and propel themselves, and run from one place in order to renew the same game with some other little creature; or madly they precipitate themselves upon one another, combat and struggle until the one conquers and the other is subdued; or carelessly they swim side by side, until playfulness or rapacity is awakened anew. One sees that these little creatures, which the sharpest eye cannot detect without the aid of the microscope, are susceptible of enjoyment and pain; in them lives an instinct which induces them to seek, and enables them to find, sustenance, which points out and leads them to avoid and to escape the enemy stronger than themselves. Here one tumbles about in mad career and drunken lust, it stretches out its feelers, beats about its tail, tears its fellows, and is as frolicsome as if perfectly happy. It is gay, cheerful, hops and dances, rocks and bends about upon the little waves of the water-drop. There is another creature; it does not swim about—remains upon the same spot—but it contracts itself convulsively, and then stretches itself palpitatingly out again. Who could not detect in these motions the throes of agony; and so it is; for only just now it has freed itself from the jaws of a stronger enemy. The utmost power has it exerted in order to get away; but he must have had a tight hold, severely wounded it, for only a few more throes, each becoming weaker and more faint, it draws itself together, stretches out its whole length once more, and sinks slowly to the bottom. It was a death struggle. It has expired.

On one spot a great creature lies, apparently quiet and indifferent. A smaller one passes carelessly by, and, like a flash of lightning, the first dashes upon it. Vainly does the weaker seek to escape its more powerful enemy; he has already caught it, embraces it, the throes of the vanquished cease—it has become a prey.

This is only a general glance at the life in a water-drop, but how *great* does even this already show the *small;* how wondrously does everything shape itself within that, of which we

had formerly not the least conception. These are creatures which nature nowhere presents to the eye upon an enlarged scale, so marvellous, odd, and also again so beautiful, so merry, happy in their whole life and movements; and although defective, and, in some respects, only one step removed from vegetable life, they are yet animated and possessed of will and power. It would be impossible here to give a description of all, or even of a great part of the ephemerous world in all its varied aspects; but we propose to take a nearer survey of some few at least, in order to display the life which exists in a single drop of water taken from a pond.

Slowly and gracefully through the floods of this small drop of water comes glidingly, swimming along, the little swan animalcule, turning and twisting its long pliant neck, swaying itself comfortably, and moving in every direction, sucking whatever nourishment or prey may present itself. This animalcule has its name from its likeness to the swan. It carries its neck just as proudly and gracefully arched, only the head is wanting, for at the end there is a wide opening mouth, surrounded by innumerable beam-like lashes. The entire little creature is transparent, and it seems impossible that any species of nutriment could possibly pass through the thin throat, for even water seems too coarse a material for this small tube; but scarcely does one of the variously formed *monads*, (single cells,) which exist in all waters, and of which many thousands could move and tumble freely about in the hollow of a poppy seed, approach its mouth, ere it gulps them down, we see them gliding through the throat, and see the green, gray, or white monad lying in the little, but for this animalcule, great stomach. This monad is itself an animalcule, a living atom; and possibly a still smaller animalcule serves for its nourishment; but the human eye has not yet penetrated thus far, possibly it may never do so, for the Creator has hidden from the material vision of man the limits of His creating power, alike in the infinitely great as in the infinitesimally small.

Whirling along comes swimming by the side of the swan animalcule, the *Bell*. Here nature has retained a form out of the vegetable kingdom, for the body of this animalcule is similar to the bell-shaped blossom of a Mayflower fastened to a long stem. This stem, through which passes a spiral-formed vein, a fine dark tube, is easily movable; it closes itself, screw-like, together and stretches itself out again. This is the tail of the bell animalcule.

At the end there is a little knot, and soon this knot becomes attached to the bottom, or to a blade of grass, or to a piece of wood, and the little animalcule is like a ship at anchor in a bay or harbor. Its tail extends and turns itself, and the body of the animalcule, the little bell, whose opening is at the top, begins to whirl itself round and round, and this movement is so quick and powerful that it creates, even in the billows of the water-drop, a whirlpool, which keeps ever going round wilder and more violently; it grows to a *Charybdis*, which none of the little monads who are caught within it can escape;—the whirlpool is too fierce, they get drawn into it and find a grave in the jaws of the bell animalcule. The bell closes, the tail rolls together, but soon it stretches itself out again; the bell whirls, the whirlpool goes round, and in it many a quiet and thoughtless passing monad is drawn down. But the bell animalcule is also about meeting its punishment. Again it whirls its bell violently—the tail breaks from the body, and the bell floats without control hither and thither on the waves of the water-drop; but it knows how to help itself. Nature has provided for such a catastrophe in its creation. The bell sinks to the bottom, and soon the missing tail grows again;—and if death even comes, nature has been so liberal in the creation of this little world—new life and new creatures arise so quickly out of those which have passed away, and so great is their number—that the death of one is less than a drop in the ocean, or a grain of sand in the desert of Sahara.

The lives of innumerable animalcules pass away at a breath; but they rise into existence in equally infinite numbers. The animalcules multiply in every variety of way; but the most curious is that of dividing, and out of the severed parts new animalcules are formed, which, in a few hours, again divide themselves into parts, forming new creatures—and this process of increase proceeds to infinity. Numbers alone are able in some measure to give an idea of this infinite increasing power. An animalcule requires for its parting process about five hours, after which time the new creatures stand then perfect, and these again require the same time for their increase. At this rate of increase, one single animalcule would, by the process of separation, be increased to half a million in four days, and after a month it would be inconceivable where this innumerable quantity of animalcules, which are, singly, imperceptible to the naked eye, can possibly be placed. But nature has limited even this vast

increasing power, and she freely sacrifices millions in order to preserve their species always in their proper quantities. What are, compared with these numbers, the quantities of herrings, sprats, and other fish which crowd the sea in such mighty masses? They vanish into nothingness. —*Sharpe's Magazine.*

DEFEAT AND CAPTURE OF CARACTACUS.

(A.D. 51.)

CARACTACUS took up a position of his own choosing, where the means both of approach and retreat were most convenient for himself and unfavorable to the enemy. It was defended in part by a steep and lofty acclivity; in part by stones rudely thrown together; a stream with no frequented ford flowed before it, and chosen bands of his best armed and bravest warriors were stationed in front of its defences. To the spirit and eloquence of the chief the Britons responded with shouts of enthusiasm; and each tribe bound itself, by the oaths it held most sacred, to stand its ground or fall—if it must fall—fighting. Ostorius, on his part, was amazed at the ardor of men whom he supposed to be beaten, cowed, and driven hopelessly to bay. He was even disconcerted at the strength of the British position, and the swarms which defended it. It was the eagerness of the soldiers, rather than his own courage or judgment, that determined him to give the signal for attack. The stream was crossed without difficulty, for every legionary was a swimmer, and the Britons had no engines for hurling missiles from a distance, nor were they noted even for the rude artillery of bows and slings. But they defended their rampart obstinately with poles and javelins, and from behind it dealt wounds and death upon the assailants, till the Romans could form the tortoise, approach to the foot of the wall, tear down its uncemented materials, and bursting in, challenge them to combat hand to hand. Unequal to the shock of the Roman array, the Britons retreated up the hill; the Romans, both the light and the heavy-armed, pressed gallantly upon them, and, imperfectly as they were equipped, they could withstand neither the sword and pilum of the legionary, nor the lance and spear of the auxiliary. The victory, quickly decided, was brilliant and complete. The wife and daughter of Caractacus

were taken; his brothers threw down their arms and surrendered.

The brave chief himself escaped from the slaughter, evaded the pursuit, and found an asylum for a time in the territory of the Brigantes, leaving all the south open to the invaders. He might hope to remove the contest to the northern parts of the island, a land of streams and mountains like his own long-defended Siluria; but Cartismandua, the female sovereign of this nation, (for though married, she seems herself, rather than her husband Venutius, to have been actual ruler of the Brigantes,) was determined, by her own fears and interests, to betray him to the Romans. The fame of his nine years' struggle had penetrated beyond the British isles and the Gaulish provinces; and when he was led captive through the streets of Rome, great was the curiosity of the citizens to behold the hero who had rivalled the renown of Arminius and Tacfarinas. The triumph of Claudius had been solemnized before; but the emperor gratified his vanity by exhibiting the British prince before the imperial tribunal. A grand military spectacle was devised, in which Claudius appeared seated before the gates of the Prætorian camp, attended by his guards, and surrounded by the multitude of the citizens. Agrippina, clothed like himself in a military garb, took her seat on the tribunal by his side, the ensigns of a Roman army floating over her head. The slaves and clients of the vanquished prince were first led before them, with the glittering trophies of his arms and accoutrements. Behind these marched the brothers, the wife, and the tender daughter of the hero, and their wailings moved no pity in the spectators. But the bearing of Caractacus himself, who closed the train of captives, was noble and worthy of his noble cause; nor did it fail to excite the admiration which it deserved. He was permitted to address the emperor. He reminded him that the obstinacy of his resistance enhanced the glory of his defeat; were he now put ignominiously to death,—the fate of so many worsted enemies of Rome,—his name and exploits would be soon forgotten; but if bid to live, they would be eternally remembered as a memorial of the emperor's clemency. The imperial historian was easily moved by an appeal to his yearning for historic celebrity. He granted the lives of his illustrious captives, and bade them give thanks, not to himself only, but to his consort, who shared with him the toils and distinctions of empire. —MERIVALE.

BOADICEA.

(A.D. 61.)

When the British warrior queen,
Bleeding from the Roman rods,
Sought, with an indignant mien,
Counsel of her country's gods,

Sage beneath the spreading oak
Sat the Druid, hoary chief,
Every burning word he spoke,
Full of rage and full of grief:

"Princess! if our aged eyes
Weep upon thy matchless wrongs,
'Tis because resentment ties
All the terrors of our tongues.

"Rome shall perish!—write that word
In the blood that she has spilt;
Perish hopeless and abhorr'd,
Deep in ruin as in guilt.

"Rome, for empire far renown'd,
Tramples on a thousand states;
Soon her pride shall kiss the ground—
Hark! the Gaul is at her gates.

"Other Romans shall arise,
Heedless of a soldier's name;
Sounds, not arms, shall win the prize,
Harmony, the path to fame.

"Then the progeny that springs
From the forests of our land,
Arm'd with thunder, clad with wings,
Shall a wider world command.

"Regions Cæsar never knew,
Thy posterity shall sway;
Where his eagles never flew,
None invincible as they."

Such the bard's prophetic words,
Pregnant with celestial fire,
Bending as he swept the chords
Of his sweet but awful lyre.

She, with all a monarch's pride,
Felt them in her bosom glow,
Rush'd to battle, fought, and died;
Dying, hurl'd them at the foe.

Ruffians, pitiless as proud,
Heaven awards the vengeance due;
Empire is on us bestow'd,
Shame and ruin wait for you.

—COWPER.

JERUSALEM, WITH THE MOSQUE OF OMAR ON THE SITE OF THE TEMPLE.

THE DESTRUCTION OF THE TEMPLE OF JERUSALEM.

(A.D. 70.)

IT was the 10th of August, the day already darkened in the Jewish calendar by the destruction of the former temple by the king of Babylon; it was almost passed. Titus withdrew again into the Antonia, intending the next morning to make a general assault. The quiet summer evening came on; the setting sun shone for the last time on the snow-white walls, and glistening pinnacles of the temple roof. Titus had retired to rest; when suddenly a wild and terrible cry was heard, and a man came rushing in, announcing that the temple was on fire. Some of the besieged, notwithstanding their repulse in the morning, had

sallied out to attack the men who were busily employed in extinguishing the fires about the cloisters. The Romans not merely drove them back, but, entering the sacred space with them, forced their way to the door of the temple. A soldier, without orders, mounting on the shoulders of one of his comrades, threw a blazing brand into a small gilded door on the north side of the chambers, in the outer building or porch. The flames sprung up at once. The Jews uttered one simultaneous shriek, and grasped their swords with a furious determination of revenging and perishing in the ruins of the temple. Titus rushed down with the utmost speed; he shouted, he made signs to his soldiers to quench the fire: his voice was drowned, and his signs unnoticed in the blind confusion. The legionaries either could not, or would not hear; they rushed on, trampling each other down in their furious haste, or, stumbling over the crumbling ruins, perished with the enemy. Each exhorted the other, and each hurled his blazing brand into the inner part of the edifice, and then hurried to his work of carnage. The unarmed and defenceless people were slain in thousands; they lay heaped like sacrifices, round the altar; the steps of the temple ran with streams of blood, which washed down the bodies that lay about.

Titus found it impossible to check the rage of the soldiery; he entered with his officers, and surveyed the interior of the sacred edifice. The splendor filled them with wonder; and as the flames had not yet penetrated to the holy place, he made a last effort to save it, and springing forth, again exhorted the soldiers to stay the progress of the conflagration. The centurion Liberalis endeavored to force obedience with his staff of office; but even respect for the emperor gave way to the furious animosity against the Jews, to the fierce excitement of battle, and to the insatiable hope of plunder. The soldiers saw everything around them radiant with gold, which shone dazzlingly in the wild light of the flames; they supposed that incalculable treasures were laid up in the sanctuary. A soldier, unperceived, thrust a lighted torch between the hinges of the door: the whole building was in flames in an instant. The blinding smoke and fire forced the officers to retreat, and the noble edifice was left to its fate.

It was an appalling spectacle to the Roman—what was it to the Jew? The whole summit of the hill which commanded the city, blazed liked a volcano. One after another the buildings fell in with a tremendous crash, and were swallowed up in the fiery abyss. The roofs of cedar were like sheets of flame; the gilded

pinnacles shone like spikes of red light; the gate towers sent up tall columns of flame and smoke. The neighboring hills were lighted up; and dark groups of people were seen watching in horrible anxiety the progress of the destruction; the walls and heights of the upper city were crowded with faces, some pale with the agony of despair, others scowling unavailing vengeance. The shouts of the Roman soldiery, as they ran to and fro, and the howlings of the insurgents who were perishing in the flames, mingled with the roaring of the conflagration and the thundering sound of falling timbers. The echoes of the mountains replied, or brought back the shrieks of the people on the heights; all along the walls resounded screams and wailings: men, who were expiring with famine, rallied their remaining strength to utter a cry of anguish and desolation.

The slaughter within was even more dreadful than the spectacle from without. Men and women, old and young, insurgents and priests, those who fought, and those who entreated mercy, were hewn down in indiscriminate carnage. The number of the slain exceeded that of the slayers. The legionaries had to clamber over heaps of dead to carry on the work of extermination. John, at the head of some of his troops, cut his way through, first, into the outer court of the temple, afterwards, into the upper city. Some of the priests upon the roof wrenched off the gilded spikes, with their sockets of lead, and used them as missiles against the Romans below. Afterwards they fled to a part of the wall about fourteen feet wide; they were summoned to surrender; but two of them, Mair, son of Belga, and Joseph, son of Dalai, plunged headlong into the flames.

No part escaped the fury of the Romans. The treasuries with all their wealth of money, jewels, and costly robes—the plunder which the zealots had laid up—were totally destroyed. Nothing remained but a small part of the outer cloister, in which about 6000 unarmed and defenceless people, with women and children, had taken refuge. These poor wretches, like multitudes of others, had been led up to the temple by a false prophet, who had proclaimed that God commanded all the Jews to go up to the temple, where He would display His almighty power to save His people. The soldiers set fire to the building; every soul perished.

For during all this time false prophets, suborned by the zealots, had kept the people in a state of feverish excitement, as though the appointed Deliverer would still appear. They could not, indeed, but remember the awful, the visible signs which had pre-

ceded the siege—the fiery sword, the armies fighting in the air; the opening of the great gate, the fearful voice within the sanctuary, "Let us depart;" the wild cry of Jesus, son of Ananus—*Woe, woe to the city*, which he had continued from the government of Albinus to the time of the siege, when he suddenly stopped, shrieked out—*Woe to myself!* and was struck dead by a stone. Yet the undying hopes of fierce fanaticism were kept alive by the still renewed prediction of that Great One, who would at this time arise out of Judæa, and assume the dominion of the world. This prophecy the flattering Josephus declared to be accomplished in the Roman Vespasian; but more patriotic interpreters still, to the last, expected to see it fulfilled in the person of the conquering Messiah, who would reveal Himself in the darkest hour, wither the Roman legions with one word, and then transfer the seat of empire from the Capitol to Zion.

The whole Roman army entered the sacred precincts, and pitched their standards among the smoking ruins; they offered sacrifice for the victory, and with loud acclamations saluted Titus as emperor. Their joy was not a little enhanced by the value of the plunder they had obtained, which was so great that gold fell in Syria to half its former value. The few priests were still on the top of the walls to which they had escaped. A boy emaciated with hunger came down on a promise that his life should be spared. He immediately ran to drink, filled his vessel, and hurried away to his comrades with such speed that the soldiers could not catch him. Five days afterwards the priests were starved into surrender; they entreated for their lives, but Titus answered that the hour of mercy was past; they were led to execution. —MILMAN.

LAST DAYS OF HERCULANEUM.

(A.D. 79.)

THERE was a man,
A Roman soldier, for some daring deed
That trespass'd on the laws, in dungeon low
Chain'd down. He was a noble spirit, rough,
But generous, and brave, and kind.
He had a son, 'twas a rosy boy,
A little faithful copy of his sire
In face and gesture. In her pangs she died

That gave him birth ; and ever since the child
Had been his father's solace and his care.
Every sport
The father shared and heighten'd ; but at length
The rigorous law had grasp'd him, and condemn'd
To fetters and to darkness.
The captive's lot
He felt in all its bitterness : the walls
Of his deep dungeon answer'd many a sigh
And heart-heaved groan. His tale was known, and touch'd
His jailer with compassion ; and the boy,
Thenceforth a frequent visitor, beguiled
His father's lingering hours, and brought a balm
With his loved presence that in every wound
Dropt healing. But in this terrific hour
He was a poison'd arrow in the breast
Where he had been a cure.
With earliest morn,
Of that first day of darkness and amaze
He came. The iron door was closed—for them
Never to open more ! The day, the night,
Dragg'd slowly by ; nor did they know the fate
Impending o'er the city. Well they heard
The pent-up thunders in the earth beneath,
And felt its giddy rocking ; and the air
Grew hot at length, and thick ; but in his straw
The boy was sleeping ; and the father hoped
The earthquake might pass by ; nor would he wake
From his sound rest the unfearing child, nor tell
The dangers of their state. On his low couch
The fetter'd soldier sank, and with deep awe
Listen'd the fearful sounds : with upturn'd eye
To the great gods he breathed a prayer ; then strove
To calm himself, and lose in sleep a while
His useless terrors. But he could not sleep :
His body burn'd with feverish heat ; his chains
Clank'd loud although he moved not. Deep in earth
Groan'd unimaginable thunders ; sounds,
Fearful and ominous, arose and died
Like the sad moanings of November's wind
In the blank midnight. Deepest horror chill'd
His blood that burn'd before ; cold clammy sweats
Came o'er him ; then anon a fiery thrill
Shot through his veins. Now on his couch he shrunk
And shiver'd as in fear ; now upright leap'd,
As though he heard the battle-trumpet sound,
And long'd to cope with death.
He slept at last

A troubled, dreamy sleep. Well—had he slept
Never to waken more! His hours are few,
But terrible his agony.
Soon the storm
Burst forth: the lightnings glanced; the air
Shook with the thunders. They awoke—they sprang
Amazed upon their feet. The dungeon glow'd
A moment as in sunshine—and was dark:
Again a flood of white flame fills the cell,
Dying away upon the dazzled eye
In darkening, quivering tints, as stunning sound
Dies throbbing, ringing in the ear. Silence,
And blackest darkness. With intensest awe
The soldier's frame was fill'd; and many a thought
Of strange foreboding hurried through his mind,
As underneath he felt the fever'd earth
Jarring and lifting—and the massive walls
Heard harshly grate and strain: yet knew he not,
While evils undefined and yet to come
Glanced through his thoughts, what deep and cureless wound
Fate had already given. Where, man of woe!
Where, wretched father! is thy boy? Thou callest
His name in vain—he cannot answer thee.

Loudly the father call'd upon his child;
No voice replied. Trembling and anxiously,
He search'd their couch of straw; with headlong haste
Trod round its stinted limits, and, low bent,
Groped darkling on the earth—no child was there.
Again he call'd: again at furthest stretch
Of his accursèd fetters—till the blood
Seem'd bursting from his ears, and from his eyes
Fire flash'd—he strain'd with arm extended far,
And fingers widely spread, greedy to touch
Though but his idol's garment. Useless toil!
Yet still renew'd: still round and round he goes,
And strains and snatches, and with dreadful cries
Calls on his boy. Mad frenzy fires him now:
He plants against the wall his feet;—his chain
Grasps;—tugs with giant strength to force away
The deep-driven staple;—yells and shrieks with rage;
And, like a desert lion in the snare,
Raging to break his toils, to and fro bounds.
But see! the ground is opening: a blue light
Mounts gently waving—noiseless;—thin and cold
It seems, and like a rainbow tint, not flame;
But by its lustre, on the earth outstretch'd,
Behold the lifeless child!—his dress singed,

And over his serene face a dark line
Points out the lightning's track.
The father saw,
And all his fury fled. A dead calm fell
That instant on him : speechless, fix'd he stood,
And with a look that never wander'd, gazed
Intensely on the corse. Those laughing eyes
Were not yet closed ; and round those pouting lips
The wonted smile return'd.
Silent and pale
The father stands : no tear is in his eye.
The thunders bellow—but he hears them not :
The ground lifts like a sea—he knows it not :
The strong walls grind and gape : the vaulted roof
Takes shapes like bubble tossing in the wind :
See ! he looks up and smiles ; for death to him
Is happiness. Yet could one last embrace
Be given, 'twere still a sweeter thing to die.

It will be given. Look ! how the rolling ground,
At every swell, nearer and still more near
Moves towards the father's outstretch'd arm his boy :
Once he has touch'd his garment ; how his eye
Lightens with love—and hope—and anxious fears !
Ha ! see : he has him now !—he clasps him round—
Kisses his face ;—puts back the curling locks
That shaded his fine brow ;—looks in his eyes—
Grasps in his own those little dimpled hands—
Then folds him to his breast, as he was wont
To lie when sleeping, and resign'd awaits
Undreaded death.
And death came soon and swift,
And pangless.
The huge pile sank down at once
Into the opening earth. Walls—arches—roof—
And deep foundation stones—all mingling fell !

—ATHERSTONE.

THE COLISEUM.

THE stars are forth, the moon above the tops
Of the snow-shining mountains. Beautiful !
I linger yet with nature, for the night
Hath been to me a more familiar face
Than that of man ; and in her starry shade
Of dim and solitary loveliness,
I learn'd the language of another world.

COLISEUM.

I do remember me, that in my youth,
When I was wandering, upon such a night
I stood within the Coliseum's wall,
'Midst the chief relics of all-mighty Rome:
The trees which grew along the broken arches
Waved dark in the blue midnight, and the stars
Shone through the rents of ruin; from afar
The watchdog bay'd beyond the Tiber; and
More near, from out the Cæsars' palace came
The owl's long cry, and, interruptedly,
Of distant sentinels the fitful song
Begun and died upon the gentle wind.

Some cypresses beyond the time-worn breach
Appear'd to skirt the horizon, yet they stood
Within a bow-shot. Where the Cæsars dwelt,
And dwell the tuneless birds of night, amidst
A grove which springs through levell'd battlements,
And twines its roots with the imperial hearths,
Ivy usurps the laurel's place of growth;
But the gladiator's bloody circus stands
A noble wreck in ruinous perfection!
While Cæsar's chambers and the Augustan halls
Grovel on earth in indistinct decay.

And thou didst shine, thou rolling moon, upon
All this, and cast a wide and tender light,

Which soften'd down the hoar austerity
Of rugged desolation, and fill'd up,
As 'twere anew, the gaps of centuries ;
Leaving that beautiful which still was so,
And making that which was not, till the place
Became religion, and the heart ran o'er
With silent worship of the great of old—
The dead, but sceptred sovereigns, who still rule
Our spirits from their urns ! —Byron.

BOTANY.

We see plants growing from the seed in spring-time, and gradually developing their parts : at length they blossom, bear fruit, and produce seeds like those from which they grew. Shall we commence the study of the plant with the full-grown herb or tree, adorned with flowers or laden with fruit? Or shall we commence with the seedling just rising from the ground? On the whole, we may get a clearer idea of the whole life and structure of plants if we begin at the beginning,—that is, with the plantlet springing from the seed, and follow it throughout its course of growth. This also agrees best with the season in which the study of botany is generally commenced,—namely, in the spring of the year, when the growth of plants from the seed can hardly fail to attract attention. Indeed, it is this springing forth of vegetation from seeds and buds, after the rigors of our long winter, clothing the earth's surface almost at once with a mantle of freshest verdure, which gives to spring its greatest charm. Even the dullest beholder, the least observant of nature at other seasons, can then hardly fail to ask, What are plants? How do they live and grow? What do they live upon? What is the object and use of vegetation in general, and of its particular and wonderfully various forms?

A reflecting as well as observing person, noticing the resemblances between one plant and another, might go on to inquire whether plants, with all their manifold diversities of form and appearance, are not all constructed on one and the same general plan. It will become apparent, as we proceed, that this is the case ; that one common plan may be discerned, which each particular plant, whether herb, shrub, or tree, has followed much more closely than would at first view be supposed. The differ-

ences, wide as they are, are merely incidental. What is true in a general way of any ordinary vegetable will be found true of all, only with great variation in the details. In the same language, though in varied phrase, the hundred thousand kinds of plants repeat the same story,—are the living witnesses and illustrations of one and the same plan of Creative Wisdom in the vegetable world. So that the study of any one plant, traced from the seed it springs from round to the seeds it produces, would illustrate the whole subject of vegetable life and growth. It matters little, therefore, what particular plant we begin with.

THE MAPLE.

Take, for example, a seedling maple. Sugar maples may be found in abundance in many places, starting from the seed or germinating in early spring, and red maples at the beginning of summer, shortly after the fruits of the season have ripened and fallen to the ground. A pair of narrow green leaves raised on a tiny stem make up the whole plant at its first appearance. Soon a root appears at the lower end of the stemlet; then a little bud at its upper end, between the pair of leaves, which soon grows into a second joint or stem bearing another pair of leaves, re-

sembling the ordinary leaves of the red maple, which the first did not.

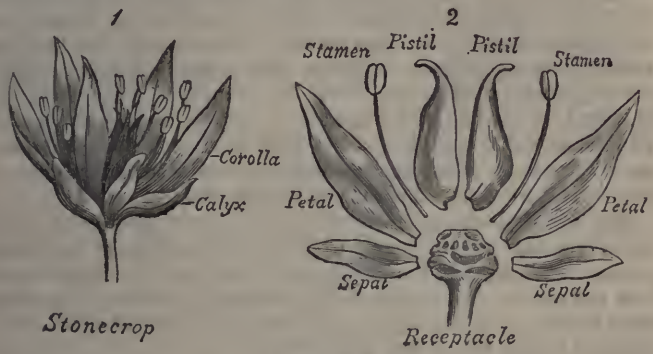
Was this plantlet formed in the seed at the time of germination, something as the chick is formed in the egg during the process of incubation? Or did it exist before in the seed, ready formed? To decide this question, we have only to inspect a sound seed, which in this instance requires no microscope, nor any other instrument than a sharp knife, by which the coats of the seed (previously soaked in water, if dry) may be laid open. We find within the seed, in this case, the little plantlet ready formed, and nothing else; namely, a pair of leaves like those of the earliest seedlings, only smaller, borne on a stemlet just like that of the seedling, only much shorter, and all snugly coiled up within the protecting seed-coat. The plant then exists beforehand in the seed in miniature. It was not formed, but only developed in germination; when it had merely to unfold and grow,—to elongate its rudimentary stem, which takes at the same time an upright position, so as to bring the leaf-bearing end into the light and air, where the two leaves expand; while from the opposite end, now pushed further downwards into the soil, the root begins to grow. All this is true in the main of all plants that spring from real seeds, although with great diversity in the particulars. At least, there is hardly an exception to the fact, that the plantlet exists ready formed in the seed in some shape or other.

The rudimentary plantlet contained in the seed is called an *embryo*. Its little stem is named the *radicle*, because it was supposed to be the root, when the difference between the root and stem was not so well known as now. It were better to name it the *caulicle*, (little stem;) but it is not expedient to change old names. The seed-leaves it bears on its summit (here two in number) are technically called *cotyledons*. The little bud of undeveloped leaves which is to be found between the cotyledons before germination in many cases (as in the pea, bean, &c.) has been named the *plumule*.

In the maple, as also in the morning glory, and the like, this bud or plumule is not seen for some days after the seed-leaves are expanded. But soon it appears in the maple as a pair of minute leaves, ere long raised in a stalk which carries them up to some distance above the cotyledons. The plantlet now consists, above ground, of two pairs of leaves—viz., 1. The cotyledons or seed-leaves, borne on the summit of the original stemlet, (the radicle;)

and 2. A pair of ordinary leaves, raised on a second joint of stem which has grown from the top of the first. Later, a third pair of leaves is formed, and raised on a third joint of stem, proceeding from the summit of the second, just as that did from the first, and so on, until the germinating plantlet becomes a tree.

So the youngest seedling, and even the embryo in the seed, is already an epitome of the herb or tree. It has a stem, from the lower end of which it strikes root; and it has leaves. The tree itself in its whole vegetation has nothing more in kind. To become a tree, the plantlet has only to repeat itself upwardly by producing more similar parts,—that is, new portions of stem, with new and larger leaves, in succession,—while beneath, it pushes its root deeper and deeper into the soil.



THE FLOWER.

The Flower.—The object of the flower is the production of seed. The flower consists of all those parts or *organs* which are subservient to this end. Some of these parts are necessary to the production of seed. Others serve merely to protect or support the more essential parts. The organs of the flower are, therefore, of two kinds; namely, first, the *protecting organs*, or *leaves of the flower*,—also called the *floral envelopes*,—and, second, the *essential organs*. The latter are situated within or a little above the former, and are enclosed by them in the bud. The floral envelopes in a complete flower are double; that is, they consist of two whorls, or circles of leaves, one above or within the other. The outer set forms the *calyx;* this more

commonly consists of green or greenish leaves, but not always. The inner set, usually of a delicate texture, and of some other color than green, and in most cases forming the most showy part of the blossom, is the *corolla.* Each leaf or separate piece of the corolla is called a *petal;* each leaf of the calyx is called a *sepal.* The sepals and the petals—or, in other words, the leaves of the blossom—serve to protect, support, or nourish the parts within. They do not themselves make a perfect flower.

Some plants, however, naturally produce, besides their perfect flowers, others which consist only of calyx and corolla, (one or both,)—that is, of leaves. These, destitute as they are of the essential organs, and incapable of producing seed, are called neutral flowers. We have an example in the flowers round the margin of the cyme of the hydrangea, and of the cranberry-tree, or snowball, in their wild state. By long cultivation in gardens, the whole cluster has been changed into showy, but useless, neutral flowers, in these and some other cases. What are called *double flowers,* such as full roses, buttercups, and camellias, are blossoms which, under the gardener's care, have developed with all their essential organs changed into petals. But such flowers are always in an unnatural or monstrous condition, and are incapable of maturing seed for want of the *essential organs.*

The essential organs are likewise of two kinds, placed one above or within the other,—namely, first, the *stamens,* or fertilizing organs; and, second, the *pistils,* which are to be fertilized and bear the seeds. Taking them in succession, therefore, beginning from below, or at the outside, we have, first, the *calyx,* or outer circle of leaves, which are individually termed *sepals;* secondly, the *corolla,* or inner circle of delicate leaves called *petals;* then a set of *stamens;* and in the centre, one or more *pistils.* The end of the flower-stalk, or the short axis, upon which all these parts stand, is called the *torus,* or *receptacle.*

A stamen consists of two parts,—namely, the *filament,* or stalk, and the *anther.* The latter is the only essential part. It is a case, commonly with two lobes or cells, each opening lengthwise by a slit, at the proper time, and discharging a powder or dust-like substance, usually of a yellow color. This powder is the *pollen,* or fertilizing matter, to produce which is the sole office of the stamen.

A pistil is distinguished into three parts; namely,—beginning from below,—the *ovary,* the *style,* and the *stigma.* The *ovary* is the hollow case or young pod, containing rudimentary seeds

called *ovules*. The *style* is the tapering part above, sometimes long and slender, sometimes short, and not rarely altogether wanting, for it is not an essential part, like the two others. The *stigma* is the tip or some other portion of the style, (or of the top of the ovary when there is no distinct style,) consisting of loose tissue, not covered, like the rest of the plant, by a skin or epidermis. It is upon the stigma that the pollen falls; and the result is, that the ovules contained in the ovary are fertilized and become *seeds*, by having an embryo formed in them. To the pistil, therefore, all the other organs of the blossom are in some way or other subservient; the stamens furnish pollen to fertilize its ovules; the corolla and the calyx form coverings which protect the whole.

These are all the parts which belong to any flower. But these parts appear under a variety of forms and combinations, some of them greatly disguising their natural appearance. To understand the flower, therefore, under whatever guise it may assume, we must study its plan. —Gray.

TO A MOUNTAIN DAISY.

Wee, modest, crimson-tippèd flower,
Thou 's met me in an evil hour:
For I maun crush amang the stoure
Thy slender stem;
To spare thee now is past my power,
Thou bonnie gem.

Alas! it 's no thy neebor sweet,
The bonnie lark, companion meet,
Bending thee 'mang the dewy weet,
Wi' speckled breast,
When upward-springing, blithe, to greet
The purpling east.

Cauld blew the bitter-biting north
Upon thy early, humble birth;
Yet cheerfully thou glinted forth
Amid the storm,
Scarce rear'd above the parent earth
Thy tender form.

The flaunting flowers our gardens yield,
High sheltering woods and wa's maun shield;

But thou beneath the random bield
O' clod or stane,
Adorns the histie stibble-field,
Unseen, alane.

There, in thy scanty mantle clad,
Thy snawy bosom sunward spread,
Thou lifts thy unassuming head,
In humble guise;
But now the share uptears thy bed,
And low thou lies!

Such is the fate of artless maid,
Sweet floweret of the rural shade!
By love's simplicity betray'd,
And guileless trust,
Till she, like thee, all soil'd, is laid
Low i' the dust.

Such is the fate of simple bard,
On life's rough ocean luckless starr'd!
Unskilful he to note the card
Of prudent lore,
Till billows rage, and gales blow hard,
And whelm him o'er.

Such fate to suffering worth is given,
Who long with wants and woes has striven,
By human pride or cunning driven
To misery's brink,
Till wrench'd of every stay but Heaven,
He, ruin'd, sink!

Even thou who mourn'st the daisy's fate,
That fate is thine—no distant date;
Stern Ruin's ploughshare drives, elate,
Full on thy bloom,
Till, crush'd beneath the furrow's weight,
Shall be thy doom!

—Burns.

BATTLE OF CHALONS.

(A.D. 451.)

It was not until the year 451 that the Huns commenced the siege of Orleans; and during their campaign in Eastern Gaul, the Roman general Aetius had strenuously exerted himself in

collecting and organizing such an army as might, when united to the soldiery of the Visigoths, be fit to face the Huns in the field. He enlisted every subject of the Roman empire whom patriotism, courage, or compulsion could collect beneath his standards; and round these troops, which assumed the once proud title of the legions of Rome, he arrayed the large forces of barbaric auxiliaries, whom pay, persuasion, or the general hate and dread of the Huns brought to the camp of the last of the Roman generals. King Theodoric exerted himself with equal energy. Orleans resisted her besiegers bravely as in after-times. The passage of the Loire was defended skilfully against the Huns; and Aetius and Theodoric, after much manœuvring and difficulty, effected a junction of their armies to the south of that important river.

On the advance of the allies upon Orleans, Attila instantly broke up the siege of that city and retreated towards the Maine. He did not choose to risk a decisive battle with only the central corps of his army against the combined power of his enemies; and he therefore fell back upon his base of operations; calling in his wings from Arras and Besançon, and concentrating the whole of the Hunnish forces on the vast plains of Chalons-sur-Marne. A glance at the map will show how scientifically this place was chosen by the Hunnish general, as the point for his scattered forces to converge upon; and the nature of the ground was eminently favorable for the operations of cavalry, the arm in which Attila's strength peculiarly lay.

It was during the retreat from Orleans that a Christian hermit is reported to have approached the Hunnish king, and said to him, "Thou art the Scourge of God for the chastisement of Christians." Attila instantly assumed this new title of terrors, which thenceforth became the appellation by which he was most widely and most fearfully known.

The confederate armies of Romans and Visigoths at last met their great adversary, face to face, on the ample battle-ground of the Chalons plains. Aetius commanded on the right of the allies; King Theodoric on the left; and Sangipan, king of the Alans, whose fidelity was suspected, was purposely placed in the centre, and in the very front of the battle. Attila commanded his centre in person, at the head of his own countrymen; while the Ostrogoths, the Gepidæ, and the other subject allies of the Huns, were drawn up on the wings. Some manœuvring appears to have occurred before the engagement, in which Aetius had the advantage, inasmuch as he succeeded in occupying a sloping hill, which com-

manded the left flank of the Huns. Attila saw the importance of the position taken by Aetius on the high ground, and commenced the battle by a furious attack on this part of the Roman line, in which he seems to have detached some of his best troops from his centre to aid his left. The Romans, having the advantage of the ground, repulsed the Huns, and while the allies gained this advantage on their right, their left, under King Theodoric, assailed the Ostrogoths, who formed the right of Attila's army. The gallant king was himself struck down by a javelin, as he rode onward at the head of his men, and his own cavalry charging over him, trampled him to death in the confusion. But the Visigoths, infuriated, not dispirited, by their monarch's fall, routed the enemies opposed to them, and then wheeled upon the flank of the Hunnish centre, which had been engaged in a sanguinary and indecisive contest with the Alans.

In this peril Attila made his centre fall back upon his camp; and when the shelter of its intrenchments and wagons had once been gained, the Hunnish archers repulsed without difficulty the charges of the vengeful Gothic cavalry. Aetius had not pressed the advantage which he gained on his side of the field, and when night fell over the wild scene of havoc, Attila's left was still unbroken; but his right had been routed, and his centre forced back upon his camp.

Expecting an assault on the morrow, Attila stationed his best archers in front of the cars and wagons, which were drawn up as a fortification along his lines, and made every preparation for a desperate resistance. But the "Scourge of God" resolved that no man should boast of having either captured or slain him; and he caused to be raised in the centre of his encampment a huge pyramid of the wooden saddles of his cavalry. Round it he heaped the spoils and the wealth that he had won, and on it he stationed his wives who had accompanied him in the campaign; and on the summit Attila placed himself, ready to perish in the flames, and balk the victorious foe of their choicest booty should they succeed in storming his defences.

But when the morning broke, and revealed the extent of the carnage with which the plains were heaped for miles, the successful allies saw also, and respected, the resolute attitude of their antagonist. Neither were any measures taken to blockade him in his camp, and so to extort by famine that submission which it was too plainly perilous to enforce with the sword. Attila was

allowed to march back the remnants of his army without molestation, and even with the semblance of success.

It is probable that the crafty Aetius was unwilling to be too victorious. He dreaded the glory which his allies the Visigoths had acquired, and feared that Rome might find a second Alaric in Prince Thorismund, who had signalized himself in the battle, and had been chosen on the field to succeed his father Theodoric. He persuaded the young king to return at once to his capital, and thus relieved himself at the same time of the presence of a dangerous friend, as well as of a formidable though beaten foe.

Attila's attacks on the Western Empire were soon renewed; but never with such peril to the civilized world as had menaced it before his defeat at Chalons; and on his death, two years after that battle, the vast empire which his genius had founded was soon dissevered by the successful revolts of the subject nations. The name of the Huns ceased for some centuries to inspire terror in Western Europe, and their ascendancy passed away with the life of the great king by whom it had been so fearfully augmented. —CREASY.

CHARLEMAGNE.

(A.D. 742–814.)

IN analyzing the characters of heroes, it is hardly possible to separate altogether the share of fortune from their own. The epoch made by Charlemagne in the history of the world, the illustrious families which prided themselves in him as their progenitor, the very legends of romance, which are full of his fabulous exploits, have cast a lustre around his head, and testify the greatness that has embodied itself in his name. None, indeed, of Charlemagne's wars can be compared with the Saracenic victory of Charles Martel; but *that* was a contest for freedom, *his* for conquest; and fame is more partial to successful aggression than to patriotic resistance. As a scholar, his acquisitions were probably little superior to those of his unrespected son; and in several points of view the glory of Charlemagne might be extenuated by an analytical dissection. But, rejecting a mode of judging equally uncandid and fallacious, we shall find that he possessed in everything that grandeur of conception which distinguishes

extraordinary minds. Like Alexander, he seemed born for universal innovation. In a life restlessly active, we see him reforming the coinage, and establishing the legal divisions of money; gathering about him the learned of every country; founding schools, and collecting libraries; interfering, but with the tone of a king, in religious controversies; aiming, though prematurely, at the formation of a naval force; attempting, for the sake of commerce, the magnificent enterprise of uniting the Rhine and the Danube; and meditating to mould the discordant codes of Roman and barbarian laws into a uniform system.

The great qualities of Charlemagne were, indeed, alloyed by the vices of a barbarian and a conqueror. Nine wives, whom he divorced with very little ceremony, attest the license of his private life, which his temperance and frugality can hardly be said to redeem. Unsparing of blood, though not constitutionally cruel, and wholly indifferent to the means which his ambition prescribed, he beheaded in one day four thousand Saxons—an act of atrocious butchery, after which his persecuting edicts, pronouncing the pain of death against those who refused baptism, or even who ate flesh during Lent, seem scarcely worthy of notice. This union of barbarous ferocity with elevated views of national improvement might suggest the parallel of Peter the Great. But the degrading habits and brute violence of the Muscovite place him at an immense distance from the restorer of the empire.

A strong sympathy for intellectual excellence was the leading characteristic of Charlemagne, and this undoubtedly biassed him in the chief political error of his conduct—that of encouraging the power and pretensions of the hierarchy. But perhaps his greatest eulogy is written in the disgraces of succeeding times and the miseries of Europe. He stands alone, like a beacon upon a waste, or a rock in the broad ocean. His sceptre was the bow of Ulysses, which could not be drawn by any weaker hand. In the dark ages of European history, the reign of Charlemagne affords a solitary resting-place between two long periods of turbulence and ignominy, deriving the advantages of contrast both from that of the preceding dynasty and of a posterity for whom he had formed an empire which they were unworthy and unequal to maintain. —HALLAM.

A DISH OF VEGETABLES.

From the moss to the palm-tree the number of contributions made by the vegetable world towards the sustenance of man would make a bulky list of benefactors. We have not room to advert to them all, still less to talk about them all. It may be well, however, and only grateful in us, as human beings and recipients of vegetable bounty, to do a little trumpeting in honor of the great families of plants which have contributed with more especial liberality towards the colonization of the world by man.

For example, there is, in the first place, the Potato family, famous for its liberal principles, and the wide sphere over which its influence is spread. The members of this family, with equal generosity, are prompt to place a luxury upon the rich man's gravy, or a heap of food beside the poor man's salt. The potato family has been for many years one of the noblest benefactors to the human colony; and when it was prevented lately, by ill-health, from the fulfilment of its good intentions, great was the anxiety of men, and many were the bulletins of health sought for and issued.

The family seat of the potatoes is well known to be in America. They are a comparatively new race in our own country, (England,) since they did not come over until some time after the Conqueror. The genealogists have nearly settled, after much discussion, that all members of this family spread over the world, are descended from the potatoes of Chili. Their town-seat is in the neighborhood of Valparaiso, upon hills facing the sea. The potatoes were early spread over many portions of America, on missions for the benefit of man, who had not been long in discovering that they were friends worth cultivating properly. It is said that the first potato who visited Europe came over with Sir Francis Drake in 1573; it is said, also, that some of the family had accompanied Sir John Hawkins in 1563; it is certain that a body of potatoes quitted Virginia in 1586, and came to England with Sir Walter Raleigh. M. Duval, who has written an elaborate history of the potato family, shows it to be extremely probable that, before the time of Raleigh, a settlement of potatoes had been found in Spain. Reaching England in 1586, the benevolent potato family was welcomed into Belgium in 1590. In 1610, the first potatoes went to Ireland, where

they eventually multiplied and grew to form one of the most important branches of this worthy race. The Scotch potatoes date their origin, as a distinct branch, from 1728. It was at dates not very different from this that other branches of the family settled in Germany. The potatoes of Switzerland first settled in 1730, in the Canton of Berne. In 1738, the thriving family extended its benevolent assistance to the Prussians; but it was not until 1767 that its aid was solicited in Tuscany. In France the kindly efforts of this family were not appreciated until, in the middle of the last century, there arose a man, Parmentier, who backed the introduction of potatoes into France with recommendations so emphatic, that it was designed to impute to him the interest of near relationship, not indeed by calling him Potato, but by calling potatoes by his name, Parmentiers. The benevolent exertions made by the potato family on behalf of France, during the famine of 1793, completely established it in favour with the grateful people.

Potatoes, though so widely spread, are unable to maintain their health under too warm a climate. On the Andes, they fix their abode at a height of ten to thirteen thousand feet; in the Swiss Alps, they are comfortable on the mountain sides, and spread in Berne to the height of five thousand feet, or not very much less. Over the north of Europe the potato family extends its labours further on into the cold than even barley, which is famous as the hardiest of grain. There are potatoes settled in Iceland, though that is a place in which barley declines to live. The potato is so nutritious, and can be cultivated with so little skill and labour, that it tempts some nations to depend solely on it for sustenance. The recent blight, especially in Ireland, consequently occasioned the most disastrous effects.

The Barley branch of the grass family has, however, a large establishment in Scotland, even to the extreme north, in the Orkneys, Shetland, and, in fact, even in the Faroe Islands. They who are in the secrets of the barleys, hint that they would be very glad to settle in the southern districts of Iceland—say about Reikiavik—if it were not for the annoyance of unseasonable rains. In Western Lapland there may be found heads of the house of barley as far north as Cape North, which is the most northern point of the continent of Europe. It has a settlement in Russia, on the shores of the White Sea, beyond Archangel. Over a great mass of Northern Siberia no barley will undertake to live; and as the potatoes have found their way into such barren dis-

tricts only here and there, the country that is too far north for barley is too far north for agriculture. There the people live a nomad life, and owe obligation in the world of plants, to lichens for their food, or to such families as offer them the contribution of roots, bark, or a few scraps of fruit.

It is not much that barley asks as a condition of its gifts to any member of the human colony. It wants a summer heat, averaging about forty-six degrees; and it does not want to be perpetually moistened. If it is to do anything at all in moist places, like islands, it must have three degrees added to the average allowance of summer heat, with which it would otherwise be content. As for your broiling hot weather, no barley will stand it. Other grasses may tolerate the tropics if they please; barley refuses to be baked while it is growing. The barleys are known to be settled as an old native family in Tartary and Sicily, two places very far apart. Their pedigree, however, and, indeed, the pedigrees of all the branches of the great grass family, must remain a subject wrapped in uncertainty, buried in darkness, and lost in a great fog of conjecture.

We find Oats spread over Scotland to the extreme north point, and settled in Norway and Sweden to the latitudes sixty-three and sixty-five. Both oats and rye extend in Russia to about the same latitude of sixty-three degrees. The benevolent exertion of oats is put forth on behalf not only of men, but also of their horses. In Scotland and Lancashire, in some countries of Germany, especially south of Westphalia, the people look to oats for sustenance. Scotch bone and muscle are chiefly indebted to oatmeal; for porridge (which consists of oatmeal and water, and is eaten with milk) is the staple—almost the only—food of the sturdy Scotch peasantry. South of the parallel of Paris, however, the friendship of oats is little cultivated. In Spain and Portugal nobody knows anything about oats, except as a point of curiosity.

The Rye branch of the grass family travels more to the north than oats in Scandinavia. In our own country we decline to receive gifts from rye. We succeed so well in the cultivation of more wealthy benefactors that we consider the rye poor friends, and, like good Britons, hold them at arms' length accordingly. In countries where the land is poor, poor rye is welcome to a settlement upon it. Rye is in great request in Russia, Germany, and parts of France, and one-third of the population of Europe look to its help for daily bread.

The most numerous and respectable members of the great grass family are those which bear the name of WHEAT. There are an immense number of different wheats: as many wheats among the grasses as there are in this country Smiths among men. We know them best as summer and winter wheats. The family seat of the wheats most probably will never be discovered. There is reason to believe that Tartary and Persia are the native countries of wheat, oats, and rye. Strabo says that wheat is native on the banks of the Indus. Probably, wherever the old seats may be, all trace of them was destroyed in very ancient times, when, even a thousand years ago and more, the plough passed over them. The settlements of wheat in Scotland extend to the north of Inverness; in Norway, to Drontheim; in Russia, to St Petersburg. How far north the wheats would consent to extend the sphere of their influence in America it is not possible to tell, because enough attempt at cultivation has not yet been made there in the northern regions. Winter cold does not concern the wheats: the spring-sown wheat escapes it, and that sown in autumn is protected by a covering of snow. Wheat keeps a respectful distance of twenty degrees from the equator; indeed, in the warm latitudes, new combinations of heat and moisture, grateful to new and very beautiful members of the vegetable world, who suit their gifts more accurately to the wishes of the people whom they feed, would cause the kind offices of wheat to be rejected, even if they could be offered there. On the mountains in warm climates, settlements of wheat of course exist. On the north side of the Himalaya mountains, wheat and barley flourish at a height of thirteen thousand feet.

The well-known name of RICE carries our thoughts to Asia. The family seat is somewhere in Asia, doubtless; but all trace of it is lost. The family has always lived in Southern Asia, where it supplies food, probably, to more men than any other race of plants has ever had occasion to support. No rice can enjoy good health without much heat and much moisture. If these could be found everywhere, everybody would cultivate a valuable friend, that is supposed to scatter over a given surface of ground more than a common share of nourishment.

Most liberal of all vegetables, however, in this respect, are the BANANAS. Humboldt tells us that they spread over the same given extent of ground forty-four times more nutritive matter than the potatoes, and a hundred and thirty-three times more than any wheat.

Where the benevolent among our grasses cease to grow, because it is too far south, there it is just far enough north for the Cocoa-Nuts, who, within their limited sphere, supply a vast contribution towards the maintenance of man, that very wise and very independent creature. Very nearly three millions of cocoanuts have been exported in one year from the Island of Ceylon.

Then there is in Brazil that excellent vegetable friend, Manioc, a shrub whose roots yield almost the only kind of meal there used. An acre of manioc is said to yield as much food as six acres of wheat.

And, to come nearer home, there is a large-hearted plant bearing the name of Maize, and the nickname of Indian corn. Its native seat has not been fixed yet by the genealogist. It grows at a good height above the sea in tropical America, and it occurs in eastern Europe on the banks of the Dniester, in latitude forty-nine. Maize does not care about the winter; it wants nothing but summer heat in a country which it is to choose as a congenial habitation. It will do also with less heat than the vine; for it has been grown in the lower Pyrenees, at three thousand two hundred and eighty feet above the level of the sea, the vine stopping at two thousand six hundred and twenty.

We have here spoken only of a few of the great liberal families belonging to the world of plants; families to which the human colony looks for support; upon whose aid we, in fact, depend for our existence. The whole list of our vegetable patrons would be very long. Respectable names must crowd down upon every memory, and take us off to

> "Citron groves;
> To where the lemon and the piercing lime,
> With the deep orange, glowing through the green,
> Their lighter glories blend. Lay us reclined
> Beneath the spreading tamarind"—

in fact, take us a long dance among roots, and fruits, and vegetables. It must be enough, therefore, that we have here briefly expressed a general sense of obligation to our vegetable friends, and hinted at a fact which, in our high philosophy, we now and then forget, that the outer world may be a shadow, or a reflex of our own minds, or anything you please to call it; but that we, poor fellows, should be rather at a loss for dinner if the earth did not send up for us, out of a kitchen that we did not build, our corn, and wine, and oil. —*Household Words.*

THE LINDEN TREE.

HERE 's a song for thee—of the linden tree !
A song of the silken lime !
There is no other tree so pleaseth me,
No other so fit for rhyme.

When I was a boy it was all my joy
To rest in its scented shade,
When the sun was high, and the river nigh
A musical murmur made.

When floating along, like a wingèd song,
The traveller-bee would stop,
And choose for his bower the lime-tree flower,
And drink—to the last sweet drop.

When the evening star stole forth, afar,
And the gnats flew round and round,
I sought for a rhyme beneath the lime,
Or dream'd on the grassy ground.

Ah ! years have fled ; and the linden dead,
Is a brand on the cottier's floor,
And the river creeps through its slimy deeps,
And youth—is a thought of yore !

Yet—they live again, in the dreamer's brain,
As deeds of love and wrong,
Which pass with a sigh, and seem to die,
Survive in the poet's song.

—BARRY CORNWALL.

VEGETABLE CLOTHING—FLAX, HEMP, AND COTTON.

THE *vegetable* matters employed for clothing are chiefly of two kinds : the fibres of plants, and the downy substance in which the seeds are sometimes embedded. The fibrous or stringy texture is very prevalent in vegetables. We see it in the bark and wood of trees, in the stalks of green or herbaceous plants, and in the leaves of all. The longer parallel fibres are held together by shorter cross ones, forming a network, cemented by a glutinous matter. The ingenious, though but half-civilized, people of Otaheite have discovered a method of making tolerable cloth of the inner bark of certain trees, by steeping it in water, and then

beating it with a wooden mallet. But the more artful way of employing vegetable fibres consists in an entire separation of them from the matter that held them together, reducing them to clean loose bundles, then twisting them into threads, and lastly interweaving them.

The plants selected in Europe for the purpose of making thread and cloth from their fibres are chiefly flax and hemp. *Flax* (in

FLAX PLANT.

Latin *linum*, whence the word *linen*) is an annual plant, rising on a single stalk to a moderate height, and crowned with handsome blue flowers, succeeded by globular seed vessels. It is suffered to grow till the seeds are ripe, and is then plucked up by the hand, laid in little bundles to dry, deprived of its seed vessels, and then put into pits of water to rot. The purpose of this part of the process is to dissolve a mucilaginous matter, which holds the fibres together; and it is the most disagreeable part of the management of flax, as the smell arising from it while rotting is extremely offensive, and prejudicial to the health. When the flax has lain long enough it is taken out, washed, dried, then beaten with mallets, combed, and by various other operations so prepared, that the long fibres are got by themselves, clean and loose, in which state they are called *flax;* the shorter and coarser fibres, separated by the comb, are called *tow*. The operation of

spinning, which it next undergoes, consists in drawing out, with the fingers, several of the fibres together, and twisting them. The product of spinning is thread, which is more or less fine according to the dexterity of the spinner and the nature of the material. Some thread closer twisted than the rest is kept for needlework, but the greater part is made up in bundles, called linen-yarn, and committed to the weaver.

Weaving may be regarded as a finer kind of matting. To perform it, the threads, which form the length of a piece of cloth, are first disposed in order, and strained by weights to a proper tightness; this is called the *warp*. These threads are divided by an instrument called a reed, into two sets, each composed of every other thread; and while, by the working of a treadle, each set is thrown alternately up and down, the cross-threads, called the *woof* or *weft*, are inserted between them, by means of a little instrument, sharp at both ends, called a shuttle, which is briskly shot from one of the weaver's hands to the other, placed on the opposite sides of the work, and carries the thread with it. This is the simplest kind of weaving; but numberless are the additional contrivances made for all the curious works wrought in the loom which have been the objects of human ingenuity for many ages.

The linen fabrics are of all degrees of fineness, from coarse sheeting to cambric, almost emulating a spider's web. They are brought to that extreme whiteness which we so much admire by the process of bleaching. This consists in their exposure to the action of the sun and air, with frequent watering, and often with the help of some acid liquor, which quickens the operation. The value that can be given to a raw material by manufacturing is in few instances more strikingly exemplified than in the conversion of flax into Brussels lace, some of which sells for several guineas a yard. Indeed, if you look at a plant of flax growing, and then at the frill of your shirt, you cannot fail to be struck with admiration of human skill and industry.

Hemp is a much taller and stronger plant than flax. It has a square rough stalk, rising to the height of five or six feet, and sending off branches. Its fibrous part consists in the bark surrounding the main stalk. Hemp undergoes the same general preparation as flax before it is consigned to the weaver; but, being of a stronger and coarser texture, it requires more labor to get the fine fibres separate from the rest. Hence it is commonly employed in the more homely manufactures; it is the principal material of sailcloth, a fabric, the strength of which is required

to be proportional to the violence it has to undergo from storms and tempests; and it is equally important to navigation, from its use in making cordage; for which purpose it is taken nearly in a raw state, and twisted into coarse twine, which is afterwards united to make rope.

Whilst the inhabitant of the northern and temperate regions is obliged to exercise much labor and contrivance in procuring his vegetable clothing from the stalks of plants, the native of the

This figure represents a species of cotton plant found in India, and shows the manner in which the cotton escapes from the capsule.

fruitful south enjoys the benefit of a material presented in greater abundance, and in a state requiring much less preparation before it is fitted for the manufacturer. This is *cotton*, a white woolly substance contained in the seed-pod of a family of plants, some of which are annual and herbaceous, others perennial and shrubby. The pods, when ripe, open of themselves, and the cotton is plucked out of them by the fingers, with the seeds sticking to it; these

are separated by means of mills, which pull out and loosen the down. It is then in a state fit to be sent from the planter to the manufacturer. The further operations it undergoes are picking, carding, and roving, which last brings off the fibres longitudinally in a continued loose line; these are next twisted and drawn out, so as to make thread or yarn, and the material is then consigned to the weaver. The vast extension of the cotton manufacture in this country has caused these preparatory operations to be performed by a system of complex machinery, the invention of the late Sir Richard Arkwright.

The fabrics made from cotton are probably more various and numerous than from any other material. They comprehend stuffs of all degrees of fineness, from the transparent muslin of a robe, or a turban, to the thick plush and warm bed-quilt. The commerce of Great Britain has, of late years, been peculiarly indebted to the cotton manufacture, which produces clothing for people of all ranks, from Russia to Guinea, and unites elegance with cheapness in an unusual degree. Great quantities of the native fabrics of the East are also imported into Europe. Some of these, from excellence in the material and incomparable manual dexterity and patience in the workmen, though made with very simple machinery, equal in fineness and beauty anything of European manufacture. The natives are said to perform their finest work in moist cool places underground, which makes the cotton hold together so as to draw out to the thinnest threads; and the soft and delicate fingers of the Indian women give them the sense of feeling to a degree of nicety much beyond that of Europeans.

It is probable that cotton at present clothes more people in the world than any other substance. Its peculiar advantage, besides cheapness, is the union of warmth with lightness, whence it is fitted for a great variety of climates. To the hot it is better adapted than linen, on account of its absorbing quality, which keeps the skin dry and comfortable. The woolliness of cotton gives a kind of nap to the cloth made of it, which renders it soft to the touch, but apt to attract dust. In the fine muslins this is burned off, by passing them between heated cylinders with such velocity as not to take fire, which, considering the combustibility of cotton, must be a very nice operation. —Dr. Aikin.

THE BALLAD OF ROU.

(A.D. 912.)

From Blois to Senlis, wave by wave, roll'd on the Norman flood,
And Frank on Frank went drifting down the weltering tide of blood;
There was not left in all the land a castle wall to fire,
And not a wife but wail'd a lord, a child but mourn'd a sire.
To Charles the king, the mitred monks, the mailèd barons flew,
While, shaking earth, behind them strode the thunder march of Rou.

"O king," then cried those barons bold, "in vain are mace and mail;
We fall before the Norman axe, as corn before the hail."
"And vainly," cried the pious monks, "by Mary's shrine we kneel;
For prayers, like arrows, glance aside, against the Norman steel."
The barons groan'd, the shavelings wept, while near and nearer drew,
As death-birds round their scented feast, the raven flags of Rou.

Then said King Charles, "Where thousands fail, what king can stand alone?
The strength of kings is in the men that gather round the throne.
When war dismays my barons bold, 'tis time for war to cease;
When Heaven forsakes my pious monks, the will of Heaven is peace.
Go forth, my monks, with mass and rood, the Norman camp unto,
And to the fold, with shepherd crook, entice this grisly Rou.

"I'll give him all the ocean coast, from Michael Mount to Eure,
And Gille, my child, shall be his bride, to bind him fast and sure;
Let him but kiss the Christian cross, and sheathe the heathen sword,
And hold the lands I cannot keep, a fief from Charles his lord."
Forth went the pastors of the Church, the shepherds' work to do,
And wrap the golden fleece around the tiger loins of Rou.

Psalm-chanting came the shaven monks, within the camp of dread;
Amidst his warriors, Norman Rou stood taller by the head.
Out spoke the Frank archbishop then, a priest devout and sage,—
"When peace and plenty wait thy word, what need of war and rage?
Why waste a land as fair as aught beneath the arch of blue,
Which might be thine to sow and reap?—Thus saith the king to Rou:

"'I'll give thee all the ocean coast, from Michael Mount to Eure,
And Gille, my fairest child, as bride, to bind thee fast and sure;
If thou but kneel to Christ our God, and sheathe thy paynim sword,
And hold thy land, the Church's son, a fief from Charles thy lord.'"
The Norman on his warriors look'd—to counsel they withdrew;
The saints took pity on the Franks, and moved the soul of Rou.

So back he strode, and thus he spoke to that archbishop meek:
"I take the land thy king bestows, from Eure to Michael-peak;

I take the maid, or foul or fair, a bargain with the coast;
And for thy creed, a sea-king's gods are those that give the most.
So hie thee back, and tell thy chief to make his proffer true,
And he shall find a docile son, and ye a saint, in Rou."

So o'er the border stream of Epte came Rou the Norman, where,
Begirt with barons, sat the king, enthroned at green St. Clair;
He placed his hand in Charles's hand—loud shouted all the throng;
But tears were in King Charles's eyes—the grip of Rou was strong.
"Now kiss the foot," the bishop said, "that homage still is due;"
Then dark the frown and stern the smile of that grim convert, Rou.

He takes the foot, as if to slavish lips to bring;
The Normans scowl; he tilts the throne, and backward falls the king!
Loud laugh the joyous Norman men—pale stare the Franks aghast;
And Rou lifts up his head, as from the wind springs up the mast:
"I said I would adore a God, but not a mortal too;
The foot that fled before a foe let cowards kiss!" said Rou.

—Bulwer.

DISCIPLINE.

Perhaps there have never been occasions when the habit of instantaneous obedience to the voice of duty has produced more touching instances of forbearance and unselfishness, than in the confusion and despair of a shipwreck.

In British ships of war, unshrinking obedience, heeding nothing but the one matter in hand, is the rule. "As a landsman," says Colonel Fisher, an engineer officer, who was on board the *Plover* gun-boat in the hottest fire on the Peiho river, "I was much struck with the coolness with which the navigation of the vessel was attended to; the man in the chains cries the soundings, the master gives his orders to the man at the helm and the engineers below; the helmsman has no eyes or ears but for the master's directions and signals. . . . All seem intent on what is their duty at the time being, and utterly unmindful of the struggle raging around them." And this when not only were they being shot down every moment, but when each comparatively harmless ball rocked the gun-boat, sent splinters flying, or brought the yards down upon their heads. Where such conduct is regarded as a mere matter of course, from the gray-headed admiral down to the cadet and the cabin-boy, no wonder that multitudes of deeds have been done, glorious because they placed duty far above self,

and proved that Nelson's signal is indeed true to the strongest instinct of the British sailor.

The only difficulty is to choose among the instances of patient obedience on record; and how many more are there, unknown to all but to Him who treasures up the record until the day when "the sea shall give up her dead!" Let us cast a glance at the *Atalante*, bewildered in a fog upon the coast of Nova Scotia, and deceived by the signal guns of another ship in distress, till she struck upon the formidable reefs known by the name of the Sister Rocks, off Sambro Island. The wreck was complete and hopeless, and a number of men scrambled at once into the pinnace; but the captain, seeing that she could never float so loaded, ordered twenty of them out, and was implicitly obeyed, so entirely without a murmur, that as the men hung clinging to the weather-gunwale of the ship, they drowned the crashing of the falling masts with their cheers.

As soon as the pinnace was lightened, she floated off, but immediately turned bottom upwards. Still the crew never lost their self-possession for one moment, but succeeded in righting her, and resuming their places, without the loss of a man. They then waited beyond the dash of the breakers on the reef, for Captain Hickey and their companions, who were still clinging to the remains of the ship. There were two other boats, but too small to hold the whole number, and an attempt was made to construct a raft, but the beating of the waves rendered this impossible, so that the men already in the pinnace were directed to lie down in the bottom, and pack themselves like herrings in a barrel, while the lesser boats returned through the surf to pick off the rest—a most difficult matter, and indeed some had to be dragged off on ropes, and others to swim, but not one was lost. The captain was of course the last man to quit the wreck, though several of the officers were most unwilling to precede him even for a moment, and by the time he reached the boat, the last timbers had almost entirely disappeared, amid the loud cheers of the brave-hearted crew.

Nothing was saved but the admiral's despatches, which the captain had secured at the first moment, and the chronometer. This last was the special charge of the captain's clerk, who had been directed always to hold it in his hand when the guns were fired, or the ship underwent any shock, so as to prevent the works from being injured. On the first alarm he had caught up the chronometer and run on deck, but being unable to swim, was

forced to cling to the mizen-mast. When the ship fell over, and the masts became nearly horizontal, he crawled out to the mizen-top, and sat there until the spar gave way and plunged him into the waves, whence he was dragged into one of the boats, half-drowned, but grasping tight his precious trust. A poor merry negro, who held fast to his fiddle to the last moment, as he clung to the main-chains, was obliged to let his instrument go, amid the laughter and fun of his messmates, who seem to have found food for merriment in every occurrence. No one had a full suit of clothes, but an old quartermaster, named Samuel Shanks, who had comported himself as composedly as if shipwrecks befell him every day, and did not even take off his hat, except for a last cheer to the *Atalante* as she sunk. He recollected that he had a small compass seal hanging to his watch, and this being handed to the captain in his gig, and placed on the top of the chronometer, it proved steady enough to steer by, as the three boats crept carefully along in the dense fog. They landed, after a few hours, on the coast, about twenty miles from Halifax, at a fishing station, where they were warmed and fed.

Thence the captain took the most exhausted and least-clothed of the party in the boats to Halifax, leaving the others to march through the half cleared country. Before night the whole ship's company assembled, without one man missing, in as complete order as if nothing had happened.

Here perfect discipline had proved the means of safety, and hope had never failed for a moment; but we have still fresh in our memories an occasion where such forbearing obedience led to a willing self-sacrifice, when safety might have been possible to the strong at the expense of certain destruction to the weak.

The *Birkenhead*, a war steamer used as a transport, was on her way to Algoa Bay with about six hundred and thirty persons on board, one hundred and thirty-two being her own crew, the rest being detachments from the 12th, 74th, and 91st regiments, and the wives and children of the soldiers. In the dead of the night between the 25th and 28th of February, the vessel struck on a reef of sunken rocks on the African coast, and, from the rapidity with which she was moving, and the violence of the waves, became rapidly a hopeless wreck. On the shock the whole of the men and officers hurried on deck, and the commanding officer, Lieutenant-Colonel Seton, calling the other officers about him, impressed on them the necessity of preserving order

and silence among the men, and placed them at the disposal of the commander of the vessel.

Sixty were placed at the pumps, others to disengage the boats, and others to throw the poor horses overboard, so as to lighten the ship, while the rest were sent to the poop to ease the fore part of the ship. Every one did as directed, and not a murmur or cry was heard. They were steady as if on parade, as ready as though embarking in a British harbor.

The largest boat was unhappily too much encumbered to be got at quickly enough, but the cutter was filled with the women and children, and pushed off, as did two other small boats. The other two large ones were, one capsized, the other stove in by the fall of the funnel, which took place immediately after the cutter was clear of the ship, only twelve or fifteen minutes after the ship had struck. At the same time the whole vessel broke in two parts, crosswise, and the stern part began to sink and fill with water. The commander called out, "All those that can swim jump overboard and swim for the boats."

But Colonel Seton, and the officers with him, besought their men to forbear, showing them that if they did so, the boats with the women must be swamped. And they stood still. Not more than three made the attempt. Officers and men alike waited to face almost certain death rather than endanger the women and children. Young soldiers, mostly but a short time in the service, were as patiently resolute as their elders. In a few moments the whole of these brave men were washed into the sea, some sinking, some swimming, some clinging to spars. The boats picked up as many as was possible without overloading them, and then made for the shore, which was only two miles off, hoping to land these and return for more, but the surf ran so high that landing was impossible, and after seeking till daylight for a safe landing-place, they were at last picked up by a schooner, which then made for the wreck, where thirty or forty were still clinging to the masts in a dreadful state of exhaustion.

A few, both of men and horses, had succeeded in swimming to the shore, but some were devoured by the sharks on the way, and out of the whole number in the ship only one hundred and ninety-two were saved. But those who were lost, both soldiers and sailors, have left behind them a memory of calm, self-denying courage as heroic as ever was shown on battle-field.

—*Author of the "Heir of Redclyffe."*

CHEMISTRY.

The science of Chemistry has for its object the study of the nature and properties of the different substances of which the earth, the waters, the air, and their inhabitants (namely, plants and animals) are composed. In a word, it embraces the study of everything under heaven accessible to man. In its highest branches it aims at discovering the laws or rules which regulate the formation of chemical compounds generally, and in its useful applications it has been already exceedingly serviceable in directing and improving the various arts of common life, as agriculture, the working of metals, dyeing, and many other pursuits. It serves also to guide the medical man in the preparation of his remedies, and also occasionally in distinguishing between diseases which are in other respects much alike. There is, indeed, scarcely a situation in life in which a knowledge of chemistry may not prove directly useful. Lastly, it is a science, the study of which, from its simplest beginnings to its highest attempts, is rendered delightful by the constant succession of new and interesting things brought before the eye and the mind.

Almost all the substances just spoken of as the objects of chemical study, namely, the various rocks, clays, sands, and soils which compose the solid earth; the water of seas and rivers; the materials of plants and animals, are of a compound nature, that is, are made up of two or more other substances united or combined together in a manner so close and intimate as not to be generally separable by any common means; and the compound so produced is almost always different in properties and appearance from the substances of which it is really composed. These latter may themselves be of a compound nature, and each formed in like manner by the union of two or more other substances very strongly joined together, but still capable of separation by proper chemical means. Such an act of separation is called by the name of *chemical decomposition*, and the original compound substance is in such a case said to be chemically decomposed into its *components* or *constituents*.

As an example:—A piece of limestone, coral-rock, or chalk, heated redhot for half an hour, loses nearly half its weight, and becomes quicklime. The loss is caused by the separation from the limestone of another substance (called carbonic acid) which is carried off by the vapors of the fire, but which could be easily

caught and collected by proper means. The limestone is therefore decomposed by the action of heat into its components, lime and carbonic acid, which, by their union, formed the limestone, or, as it is called in chemical speech, carbonate of lime.

Both the carbonic acid, however, and the lime, are themselves of a compound nature; the first may be decomposed into two other substances, carbon and oxygen, and the second into a metallic matter, calcium, and oxygen. Mere heat, indeed, will not produce this effect, which can only be brought about by very powerful means of decomposition.

In this manner a limit or boundary is sooner or later reached, and substances obtained which completely defy the efforts of the chemist to decompose them further; the carbon, oxygen, and calcium of the limestone arrived at by two successive steps of decomposition are found to resist all further attempts at decomposition; such substances are called *simple* or *elementary*, or sometimes, *chemical elements.*

The number of these elementary substances known to exist, alters with the progress of chemical science; substances which at one period resisted decomposition gave way when new and more powerful means for that purpose were applied; besides which, minerals and waters containing new elements are met with from time to time. At present they amount to over sixty. Very many of them, however, are exceedingly rare, the compounds containing them being found in very small quantities.

Elementary substances are always divided by chemists into two classes—namely, *metals* and *non-metallic substances.* The well-known and abundant metals, gold, silver, copper, iron, tin, and lead, together with a great number of rarer and less familiar substances, will stand in the first class. The components of the atmosphere, oxygen and nitrogen, sulphur, phosphorus, and several others, belong to the second class. Several of the elements, however, possess properties which render it difficult to decide in which class to place them.

It is very important to understand what in science is called a *physical state* or *condition* of a substance, simple or compound, as contrasted with its chemical nature. There are three such states, the *solid, fluid* or *liquid*, and *gaseous*, which one and the same substance may assume, passing from one to the other, backwards and forwards, without the slightest change of chemical nature. For example, water, as commonly met with, is liquid, but when cooled sufficiently it takes the solid form, and becomes ice; and,

on the other hand, when sufficiently heated, boils and becomes steam or vapor, which is the gaseous condition of water. By cooling this vapor, it again becomes liquid, and, by still further cooling, it freezes to ice, and all this without the least chemical change or decomposition of any kind. The metal zinc melts easily when heated to a moderate extent, and, when still further heated, vaporizes, or becomes converted into vapor, which, by cooling again, becomes liquid; and lastly, solid. In fact, very many substances, simple and compound, behave in the same manner, and have the power of existing in all three states, and a still greater number in two of them, the solid and the liquid, or the liquid and the gaseous.

Although a gas or vapor (which is the same thing in reality) is very frequently invisible to the eye, it is as much substance or matter as a solid or a fluid; it fills vessels, and possesses weight, and can be handled and experimented with, by proper means, with as much ease and certainty as a solid or a liquid. Some gases, however, are colored yellow, violet, or red, and then they become, of course, evident to the eye.

The physical state of a substance is, in fact, dependent upon its relations to heat; a subject which must be considered in a future lesson. —FOWNES.

ATMOSPHERIC PHENOMENA.

MOISTURE—EVAPORATION—DEW—MISTS AND CLOUDS—RAIN, SNOW, AND HAIL.

PLANTS derive the moisture which is necessary for their support and growth mainly from the moisture held in the atmosphere as vapor. Evaporation is well illustrated by the gradual disappearance of a pool of water, and by the drying of wet bodies. Thus water is diffused through the air as an invisible vapor. The capacity which the air has of holding vapor increases with its temperature; hence the greater rapidity of evaporation in warm than in cold air. Beyond the capacity of the surrounding air, evaporation will not go on; and hence when the air is as highly saturated with vapor as its temperature admits of, it is said to be fully charged; if it holds fifty per cent., it is said to be half charged; if twenty-five per cent., one quarter charged, and so on. The degree of charge, therefore, shows only the amount of moisture in the air *as compared with its capacity at its then temperature*, so

that the air is generally moister in winter than in summer, though less saturated with vapor.

If the air is by any cause cooled down below the temperature at which the moisture which it holds will be its full charge, a part of its vapor will necessarily separate from it in the form of water. Thus we see that cold bodies placed in the open air become studded with drops of water—*dew-drops*—because they cool down the surrounding air below its point of full charge. The same phenomenon is daily witnessed in the windows of inhabited rooms. The cold panes cool down the warm moist air of the room, lessen the amount of moisture which it is capable of containing, and cause it to part with its superabundance in the form of water.

Dew, after sunset, is caused by the temperature of moist, solid bodies falling below that of the air, the extent to which the cooling is carried depending on the power which the substances have of radiating or parting with the heat which they have absorbed during the day. Plants radiate better than stones or soil, and these again better than metals. Dew is deposited most plentifully in cloudless, starry nights, because, in these circumstances, radiation goes on more quickly than when the sky is clouded. Under the clear skies of the tropics the effect of the fall of dew is like that of a smart shower of rain. When the dew is frozen it is called hoarfrost.

Mists and Clouds.—The dew-deposits of which we have been speaking are brought on by means, and on the surface, of bodies surrounded by the air; but if a large mass of the air is cooled down throughout below dew-point, (that is, below the point at which it is overcharged with moisture, and consequently begins to deposit dew-drops,) the water that separates from it does not run together into drops, but forms little vapor-vesicles, or cloud-bubbles, which float in the air, containing within these thin bulbs air fully charged with moisture. This state of the atmosphere causes mists. Clouds are only masses of mists in the upper air, caused by the cooling of the higher layers of the atmosphere.

Rain, Snow, Hail.—If, being on a mountain while it rains, you enter the region of clouds, you will find yourself suddenly surrounded with thick masses of fog, and will perceive the fine droplets of the falling mists. But these little drops become larger as they fall; for, just as happens when any other cold body is plunged into moist air, water is thrown down upon the surfaces of these little drops on their way down through the lower, warmer, and vapor-charged layers of the atmosphere. The rain, there-

fore, which comes down to the earth is derived not only from the clouds floating in the higher atmosphere, which are only its first sources, but also from the lower regions between them and the earth, the whole of which contribute to its increase as it descends. A great difference may, therefore, be found between the amount of rain which falls on the top of a mountain, or even of a high tower, and that which is caught during the same time at the foot of either. Thus the yearly rain-fall on the roof of the Royal Palace at Berlin is eighteen inches in depth, while that on the pavement of the Palace-Place amounts to twenty inches.

When the moist air in the upper regions is cooled down below the freezing-point, the water that it lets fall solidifies and comes down as snow. It is often remarked that it rains on the low-lying lands while it is snowing on the mountains. In such case the rain was withdrawn from the moist, cold air, in the form of snow, but was melted during its fall through the lower and warmer regions. This thawing is often imperfect; it then rains and snows at once, or the snow-flakes, only softening, cling together, and come down as sleet, which falls so often when winter is passing into spring. Sleet is met with in summer only on high mountains. It is probable that hail consists of flakes of snow or sleet, which have been formed in the upper regions, and round which, on their way down, the crust of ice was formed, which in almost all hailstones surrounds a core of white within.

On the crests of very high mountains—for instance, on the Alps—single clouds are often seen to hang for days apparently motionless. They are, however, in ceaseless motion, just as is the moist air from which they are formed, as it sweeps over the cold and perhaps snow-capped peaks. With this air they travel on, and vanish again as soon as they are out of reach of the cooling influence; not, however, generally without leaving behind a part of their moisture as a fall of rain or snow. Thus the Alps are often, for many days together, shrouded in dense clouds, from which rain pours heavily every day, while over the warm valley of the Po, notwithstanding the constant south wind, the sky has never been clouded for a moment. In the same manner all high mountains are withdrawing the waters from the air, even when it does not rain on the plains. Thus they are, in all parts of the world, the spots which form the chief points for the settlement of the moisture of the air, and are the main feeders of the rivers.

The wide plains of Northern India are, as you know, burning hot and dry during the summer. The currents of air rising

up from the heated soil hinder the fall of wet from the air. The waters of the air, which are brought in unceasingly from the Indian Ocean by the south wind, (the summer monsoon,) cannot, therefore, be set down before they reach the Himalaya mountains, which, stretching for a length of nearly fourteen hundred miles, almost due east and west, form the boundary of India. Here, however, the moisture is so thoroughly arrested, that the south wind having passed the mountain-range, is almost completely dry before it reaches Inland Asia. Thus the steppes of arid Asia form, for the most part, dry, barren wastes, with very hot summers and severe winters. —*Constable's Sixth Reader.*

THE CLOUD.

I BRING fresh showers for the thirsting flowers,
From the seas and the streams;
I bear light shade for the leaves when laid
In their noonday dreams;
From my wings are shaken the dews that waken
The sweet birds every one,
When rock'd to rest on their mother's breast,
As she dances about the sun.
I wield the flail of the lashing hail,
And whiten the green plains under;
And then again I dissolve it in rain,
And laugh as I pass in thunder.

I sift the snow on the mountains below,
And their great pines groan aghast;
And all the night 'tis my pillow white,
While I sleep in the arms of the blast.
Sublime on the towers of my skyey bowers,
Lightning, my pilot, sits;
In a cavern under is fetter'd the thunder—
It struggles and howls by fits:
Over earth and ocean, with gentle motion,
This pilot is guiding me,
Lured by the love of the genii that move
In the depths of the purple sea;
Over the rills, and the crags, and the hills,
Over the lakes and the plains,
Wherever he dream, under mountain or stream,
The spirit he loves remains;
And I all the while bask in heaven's blue smile,
While he is dissolving in rains.

The sanguine sunrise, with his meteor eyes,
And his burning plumes outspread,
Leaps on the back of my sailing rack,
When the morning star shines dead;
As on the jag of a mountain crag,
Which an earthquake rocks and swings,
An eagle, alit, one moment may sit,
In the light of its golden wings
And when sunset may breathe, from the lit sea beneath,
It ardors of rest and love,
And the crimson pall of eve may fall
From the depth of heaven above;
With wings folded I rest, on mine airy nest,
As still as a brooding dove.

That orbèd maiden, with white fire laden,
Whom mortals call the moon,
Glides glimmering o'er my fleece-like floor,
By the midnight breezes strewn;
And wherever the beat of her unseen feet,
Which only the angels hear,
May have broken the woof of my tent's thin roof,
The stars peep behind her and peer;
And I laugh to see them whirl and flee,
Like a swarm of golden bees,
When I widen the rent in my wind-built tent,
Till the calm rivers, lakes and seas,
Like strips of the sky fallen through me on high,
Are each paved with the moon and these.

I bind the sun's throne with a burning zone,
And the moon's with a girdle of pearl;
The volcanoes are dim, and the stars reel and swim,
When the whirlwinds my banners unfurl.
From cape to cape, with a bridge-like shape,
Over a torrent sea,
Sunbeam proof I hang like a roof,
The mountains its columns be.
The triumphal arch through which I march,
With hurricane, fire, and snow,
When the powers of the air are chain'd to my chair,
Is the million-color'd bow;
The sphere-fire above its soft colors wove,
While the moist earth was laughing below.

I am the daughter of earth and water,
And the nursling of the sky;
I pass through the pores of the ocean and shores;
I change, but I cannot die.

For, after the rain, when, with never a stain,
The pavilion of heaven is bare,
And the winds and sunbeams, with their convex gleams,
Build up the blue dome of air,
I silently laugh at my own cenotaph,
And out of the caverns of rain,
Like a child from the womb, like a ghost from the tomb,
I arise and unbuild it again. —SHELLEY.

THE GULF STREAM.

THERE is a river in the ocean. In the severest droughts it never fails, and in the mightiest floods it never overflows. Its banks and its bottom are of cold water, while its current is of warm. The Gulf of Mexico is its fountain, and its mouth is in the Arctic Seas. It is the Gulf Stream. There is in the world no other such majestic flow of waters. Its current is more rapid than the Mississippi or the Amazon, and its volume more than a thousand times greater.

The currents of the ocean are among the most important of its movements. They carry on a constant interchange between the waters of the poles and those of the equator, and thus diminish the extremes of heat and cold in every zone.

The sea has its climates as well as the land. They both change with the latitude; but one varies with the elevation above, the other with the depression below, the sea level. The climates in each are regulated by circulation; but the regulators are, on the one hand, winds; on the other, currents.

The inhabitants of the ocean are as much the creatures of climate as are those of the dry land; for the same Almighty Hand which decked the lily, and cares for the sparrow, fashioned also the pearl, and feeds the great whale, and adapted each to the physical conditions by which His providence has surrounded it. Whether of the land or the sea, the inhabitants are all His creatures, subjects of His laws, and agents in His economy. The sea therefore, we may safely infer, has its offices and duties to perform; so, we may infer, have its currents; and so, too, its inhabitants: consequently, he who undertakes to study its phenomena must cease to regard it as a waste of waters. He must look upon it as a part of that exquisite machinery by which the harmonies of nature are preserved, and then he will begin to perceive the developments of order, and the evidences of design.

From the Arctic Seas a cold current flows along the coasts of America, to replace the warm water sent through the Gulf Stream, to moderate the cold of western and northern Europe. Perhaps the best indication as to these cold currents may be derived from the fishes of the sea. The whales first pointed out the existence of the Gulf Stream by avoiding its warm waters. Along the coasts of the United States all those delicate animals and marine productions which delight in warmer waters are wanting; thus indicating, by their absence, the cold current from the north now known to exist there. In the genial warmth of the sea about the Bermudas on the one hand, and Africa on the other, we find in great abundance those delicate shell-fish and coral formations which are altogether wanting in the same latitudes along the shores of South Carolina.

No part of the world affords a more difficult or dangerous navigation than the approaches of the northern coasts of the United States in winter. Before the warmth of the Gulf Stream was known, a voyage at this season from Europe to New England, New York, and even to the Capes of the Delaware or Chesapeak, was many times more trying, difficult, and dangerous than it now is. In making this part of the coast, vessels were frequently met by snow-storms and gales, which mock the seaman's strength, and set at naught his skill. In a little while his

bark becomes a mass of ice; with her crew frosted and helpless, she remains obedient only to her helm, and is kept away for the Gulf Stream. After a few hours' run she reaches its edge, and almost at the next bound passes from the midst of winter into a sea at summer heat. Now the ice disappears from her apparel, and the sailor bathes his stiffened limbs in tepid waters. Feeling himself invigorated and refreshed with the genial warmth about him, he realises out there at sea the fable of Antæus and his mother Earth. He rises up, and attempts to make his port again, and is again, perhaps, as rudely met and beat back from the north-west; but each time that he is driven off from the contest, he comes forth from this stream, like the ancient son of Neptune, stronger and stronger, until, after many days, his freshened strength prevails, and he at last triumphs, and enters his haven in safety, though in this contest he sometimes falls, to rise no more.

The ocean currents are partly the result of the immense evaporation which takes place in the tropical regions, where the sea greatly exceeds the land in extent. The enormous quantity of water there carried off by evaporation disturbs the equilibrium of the seas; but this is restored by a perpetual flow of water from the poles. When these streams of cold water leave the poles, they flow directly towards the equator; but, before proceeding far, their motion is deflected by the diurnal motion of the earth. "At the poles they have no rotatory motion; and although they gain it more and more in their progress to the equator, which revolves at the rate of a thousand miles an hour, they arrive at the tropics before they have gained the same velocity of rotation with the intertropical ocean. On that account they are left behind, and, consequently, flow in a direction contrary to the diurnal rotation of the earth. Hence the whole surface of the ocean for thirty degrees on each side of the equator flows in a stream or current three thousand miles broad from east to west. The trade winds, which constantly blow in one direction, combine to give this great Equatorial Current a mean velocity of ten or eleven miles in twenty-four hours."

Were it not for the land, such would be the uniform and constant flow of the waters of the ocean. The presence of the land interrupts the regularity of this great western movement of the waters, sending them to the north or south, according to its conformation.

The principal branch of the Equatorial Current of the Atlantic

takes a north-westerly direction from off Cape St Roque, in South America. It rushes along the coast of Brazil; and after passing through the Carribean Sea, and sweeping round the Gulf of Mexico, it flows between Florida and Cuba, and enters the North Atlantic under the name of the Gulf Stream, the most beautiful of all the oceanic currents.

In the Straits of Florida the Gulf Stream is thirty-two miles wide, two thousand two hundred feet deep, and flows at the rate of four miles an hour. Its waters are of the purest ultramarine blue as far as the coasts of Carolina; and so completely are they separated from the sea through which they flow, that a ship may be seen at times half in the one and half in the other.

As a rule, the hottest water of the Gulf Stream is at or near the surface; and as the deep-sea thermometer is sent down, it shows that these waters, though still much warmer than the water on either side at corresponding depths, gradually become less and less warm until the bottom of the current is reached. There is reason to believe that the warm waters of the Gulf Stream are nowhere permitted, in the oceanic economy, to touch the bottom of the sea. There is everywhere a cushion of cold water between them and the solid parts of the earth's crust. This arrangement is suggestive, and strikingly beautiful. One of the benign offices of the Gulf Stream is to convey heat from the Gulf of Mexico,—where otherwise it would become excessive,—and to dispense it in regions beyond the Atlantic, for the amelioration of the climates of the British Islands, and of all Western Europe. Now, cold water is one of the best non-conductors of heat; but if the warm water of the Gulf Stream were sent across the Atlantic in contact with the solid crust of the earth, comparatively a good conductor of heat, instead of being sent across, as it is, in contact with a non-conducting cushion of cold water to fend it from the bottom, all its heat would be lost in the first part of the way, and the soft climates of both France and England would be as that of Labrador, severe in the extreme, and ice-bound.

It has been estimated that the quantity of heat discharged over the Atlantic from the waters of the Gulf Stream in a winter's day would be sufficient to raise the whole column of atmosphere that rests upon France and the British Islands from the freezing point to summer heat.

Every west wind that blows crosses the stream on its way to Europe, and carries with it a portion of this heat to temper there

the northern winds of Europe. It is the influence of this Stream that makes Erin the "Emerald Isle of the Sea," and that clothes the shores of Albion in evergreen robes; while, in the same latitude, the coasts of Labrador are fast bound in fetters of ice.

As the Gulf Stream proceeds on its course, it gradually increases in width. It flows along the coast of North America to Newfoundland, where it turns to the east, one branch setting towards the British Islands, and away to the coasts of Norway and the Arctic Ocean. Another branch reaches the Azores, from which it bends round to the south, and, after running along the African coast, it rejoins the great equatorial flow, leaving a vast space of nearly motionless water between the Azores, the Canaries, and Cape de Verd Islands. This great area is the Grassy or Sargasso Sea, covering a space many times larger than the British Islands. It is so thickly matted over with gulf weeds that the speed of vessels passing through it is often much retarded. When the companions of Columbus saw it, they thought it marked the limits of navigation, and became alarmed. To the eye, at a little distance, it seemed substantial enough to walk upon. Patches of the weed are always to be seen floating along the outer edge of the Gulf Stream. Now, if bits of cork or chaff, or any floating substance, be put into a basin, and a circular motion be given to the water, all the light substances will be found crowding together near the centre of the pool, where there is the least motion. Just such a basin is the Atlantic Ocean to the Gulf Stream; and the Sargasso Sea is the centre of the whirl. Columbus first found this weedy sea in his voyage of discovery: there it has remained to this day, moving up and down, and changing its position like the calms of Cancer, according to the seasons, the storms, and the winds. Exact observations as to its limits and their range, extending back for fifty years, assure us that its mean position has not been altered since that time.

—MAURY.

THE FIRST CRUSADE.

(A.D. 1096–1099.)

JERUSALEM, the cradle of the Christian faith, suffered cruel insults at the hands of the Mohammedans. Hakem, third of the Fatimite caliphs of Egypt, himself aspiring to the honours of a god, razed the Church of the Resurrection in A.D. 1009, and

PETER THE HERMIT PREACHING THE CRUSADES.

spared no pains to destroy the very rock-cave which was pointed out as the Holy Sepulchre. The Turks then seized the city, and Christian pilgrims, flocking thither in crowds of thousands during the eleventh century, were cruelly maltreated by them. No Christian could pass the gates without first paying a piece of gold to these Tartar conquerors. Every day brought back to Europe weary palmers, who had been scoffed at and spat upon by the infidels. This was borne for a time, but soon grew intolerable; and the indignation, burning deep and long in the heart of Christendom, found its first great utterance in the wild eloquence of Peter the Hermit.

This man, said to have been a native of Amiens, was a soldier in his youth. Upon the death of his wife he retired broken-hearted to a hermit's cell, from which, however, his innate love of change drove him a pilgrim to the Holy Land. Returning thence full of anger at the degradation of the sacred spot, he obtained leave from Pope Urban II. to call all true Christians to arms; and as he passed through Italy and France, a fleshless spectre, clad in mean raiment, with bare head and feet, and staggering under a heavy crucifix, his fierce war-cry woke an echo in millions of hearts.

Within the same year two general councils were called by the Pope—one at Placentia, the other at Clermont, in Auvergne. At the latter, A.D. 1095, both the Pope and the hermit spoke in words of fire. With one voice all who heard cried out, "It is the will of God;" and few there were who left the old market-place on that day without a red cross on the shoulder, to mark them as soldiers in the sacred cause.

The first movement of the Crusaders was a mad and aimless rush. A rabble of 300,000, comprising not men alone, but women and children, and even some stricken with deadly disease, gathered under Peter and a soldier called Walter the Penniless. They passed through Germany with no achievement but the murder and robbery of thousands of Jews. Their plundering roused the rage of the Hungarians and Bulgarians, who set upon them; and it was with sorely thinned and broken ranks that they reached Constantinople, where Alexis reigned. He persuaded them to fix their camp upon the Asiatic side of the Bosphorus. Moving thence towards Nice, in Bithynia, they were all but a very few cut to pieces by the Turks.

But an army fit to redeem the character of the West was marshalling fast. The kings as yet held aloof, in person at least. Rufus of England was too fond of his money-bags; while Henry of Germany, and Philip of France, both bitter foes of the Pope, were not likely to arm at the call of one they deeply hated. The great captain of the First Crusade was Godfrey of Bouillon or Boulogne, the Duke of Basse-Lorraine. There were, besides, among the chiefs Robert of Normandy, Hugh, the brother of the French king, Stephen of Blois, and Bohemund of Tarentum. Nine months were consumed in mustering the great army of more than half a million, and leading it by different routes to Constantinople. Having crossed the strait, the Crusaders moved, with horns blowing and drums beating, upon Nice, which fell after a siege of seven weeks. At Dorylæum was fought one of the greatest cavalry battles the world has ever seen. Considerably more than 100,000 Turkish horse, with curved sabres and light *djerrids*, were scattered before the lances of the Christian knights, and Soliman, sultan of the Turks, fell back in rapid flight. But all this glory was purchased by much suffering. Thirst was the worst woe that befell the Christians. We are told that once, when water was found after days of scorching drought, 300 of them drank till they died. They threaded the rocky wilds of Taurus, fainting with the weight of their armor under the

burning sun; and at last saw, set in the emerald meadows that line the Orontes, the fair turrets of the Syrian Antioch.

Here the war raged anew, and the Christian knights vied with one another in valorous deeds. Godfrey one day cut his foe in two: one-half fell into the river, the other sat still on horseback, "by which blow," quaintly says Robert the Monk, "one Turk was made two Turks." The siege was pushed on amidst the worst miseries of winter, famine, and disorganization, until, by the treachery of a Syrian officer, the Crusaders were enabled one dark stormy night to surprise the town. A Saracen army, led by Kerboga, Prince of Mosul, advancing to the rescue, was then repulsed with great slaughter; and Bohemund, the son of Robert Guiscard, was made prince of the captured city.

After a delay of some months at Antioch, the Crusaders, now reduced to 20,000 foot and 1500 horse, moved southward toward Jerusalem. They ought to have reduced the great stronghold of Acre, with its vast granaries, as they passed; but, eager to crown their enterprise with the capture of the Holy City, they contented themselves with extorting a promise from the Emir of Acre, that, if Jerusalem fell, he would give them up his keys. At last (A.D. 1099) the capital of Palestine, lovely even in her desolation, rose in their view. The knights, springing from their saddles, wet the turf with tears of mingled joy and grief. Barefooted and weeping, the little band advanced under a sky of burning copper, with no water in the pools and brooks; they fought for five long weeks before Godfrey and his stormers stood victorious within the walls. The massacre of 70,000 Moslems, and the burning of the Jews in their synagogue, stained the glory of the conquerors.

A kingdom of Jerusalem being then founded, Godfrey was elected king, but modestly and wisely he chose rather the humbler title of Baron of the Holy Sepulchre. The opening of his reign was signalized by the battle of Ascalon, in which he defeated the Sultan of Egypt. After this victory, which closed the First Crusade, many of the actors in the great drama went home; among these was Peter the Hermit, whose chequered life found a close in the Abbey of Huy, founded by himself on the banks of the Meuse. —COLLIER.

THE CHRISTIAN KNIGHT AND THE SARACEN CAVALIER.

The burning sun of Syria had not yet attained its highest point in the horizon, when a knight of the red cross, who had left his distant northern home, and joined the host of the crusaders in Palestine, was pacing slowly along the sandy deserts which lie in the vicinity of the Dead Sea, where the waves of the Jordan pour themselves into an inland sea, from which there is no discharge of waters.

Upon this scene of desolation the sun shone with almost intolerable splendor, and all living nature seemed to have hidden itself from the rays, excepting the solitary figure which moved through the flitting sand at a foot's pace, and appeared the sole breathing thing on the wide surface of the plain. The dress of the rider and the accoutrements of his horse were peculiarly unfit for the traveller in such a country.

A coat of linked mail, with long sleeves, plated gauntlets, and a steel breastplate, had not been esteemed a sufficient weight of armor; there was, also, his triangular shield suspended round his neck, and his barred helmet of steel, over which he had a hood and collar of mail, which was drawn around the warrior's shoulders and throat, and filled up the vacancy between the hauberk and the headpiece. His lower limbs were sheathed, like his body, in flexible mail, securing the legs and thighs, whilst the feet rested in plated shoes, which corresponded with the gauntlets.

A long, broad, straight-shaped, double-edged falchion, with a handle formed like a cross, corresponded with a stout poniard on the other side. The knight, also, bore, secured to his saddle, with one end resting on his stirrup, the long steel-headed lance, his own proper weapon, which, as he rode, projected backwards, and displayed its little pennoncelle, to dally with the faint breeze, or drop in the dead calm. To this cumbrous equipment must be added a surcoat of embroidered cloth, much frayed and worn, which was thus far useful, that it excluded the burning rays of the sun from the armor, which they would otherwise have rendered intolerable to the wearer.

The surcoat bore, in several places, the arms of the owner, although much defaced. These seemed to be a couchant leopard, with the motto, "*I sleep—wake me not.*" An outline of the

same device might be traced on his shield, though many a blow had almost effaced the painting. The flat top of his cumbrous cylindrical helmet was unadorned with any crest. In retaining their own unwieldy defensive armor, the northern crusaders seemed to set at defiance the nature of the climate and country to which they were come to war.

The accoutrements of the horse were scarcely less massive and unwieldy than those of the rider. The animal had a heavy saddle plated with steel, uniting in front with a species of breast-plate, and behind with defensive armor made to cover the loins. Then there was a steel axe, or hammer, called a mace-of-arms, and which hung to the saddle-bow; the reins were secured by chain work, and the front stall of the bridle was a steel plate, with apertures for the eyes and nostrils, having in the midst a short, sharp pike, projecting from the forehead of the horse like the horn of the fabulous unicorn.

But habit had made the endurance of this load of panoply a second nature, both to the knight and his gallant charger. Numbers, indeed, of the western warriors who hurried to Palestine died ere they became inured to the burning climate; but there were others to whom that climate became innocent, and even friendly, and among this fortunate number was the solitary horseman who now traversed the border of the Dead Sea.

Nature, which cast his limbs in a mould of uncommon strength, fitted to wear his linked hauberk with as much ease as if the meshes had been formed of cobwebs, had endowed him with a constitution as strong as his limbs, and which bade defiance to almost all changes of climate, as well as to fatigue and privations of every kind. His disposition seemed, in some degree, to partake of the qualities of his bodily frame; and as the one possessed great strength and endurance, united with the power of violent exertion, the other, under the power of a calm and undisturbed semblance, had much of the fiery and enthusiastic love of glory which constituted the principal attribute of the renowned Norman line, and had rendered them sovereigns in every corner of Europe where they had drawn their adventurous swords.

Nature had, however, her demands for refreshment and repose, even on the iron frame and patient disposition of the Knight of the Sleeping Leopard; and at noon, when the Dead Sea lay at some distance on his right, he joyfully hailed the sight of two or three palm-trees, which arose beside the well

which was assigned for his mid-day station. His good horse, too, which had plodded forward with the steady endurance of his master, now lifted his head, expanded his nostrils, and quickened his pace, as if he snuffed afar off the living waters, which marked the place of repose and refreshment. But labor and danger were doomed to intervene ere the horse or horseman reached the desired spot.

As the Knight of the Couchant Leopard continued to fix his eyes attentively on the yet distant cluster of palm-trees, it seemed to him as if some object were moving among them. The distant form separated itself from the trees, which partly hid its motions, and advanced towards the knight with a speed which soon showed a mounted horseman, whom his turban, long spear, and green caftan floating in the wind, on his nearer approach, proved to be a Saracen cavalier. "In the desert," saith an Eastern proverb, "no man meets a friend." The Crusader was totally indifferent whether the infidel, who now approached on his gallant barb, as if borne on the wings of an eagle, came as friend or foe—perhaps, as a vowed champion of the cross, he might rather have preferred the latter. He disengaged his lance from his saddle, seized it with the right hand, placed it in rest with its point half elevated, gathered up the reins in the left, waked his horse's mettle with the spur, and prepared to encounter the stranger with the calm self-confidence belonging to the victor in many contests.

The Saracen came on at the speedy gallop of an Arab horseman, managing his steed more by his limbs, and the inflection of his body, than by any use of the reins, which hung loose in his left hand; so that he was enabled to wield the light, round buckler of the skin of the rhinoceros, ornamented with silver loops, which he wore on his arm, swinging it as if he meant to oppose its slender circle to the formidable thrust of the western lance. His own long spear was not couched or levelled like that of his antagonist, but grasped by the middle with his right hand, and brandished at arm's length above his head. As the cavalier approached his enemy at full career, he seemed to expect that the Knight of the Leopard would put his horse to the gallop to encounter him.

But the Christian knight, well acquainted with the customs of Eastern warriors, did not mean to exhaust his good horse by any unnecessary exertion; and, on the contrary, made a dead halt, confident that if the enemy advanced to the actual shock, his own weight, and that of his powerful charger, would give

him sufficient advantage, without the additional momentum of rapid motion. Equally sensible and apprehensive of such a probable result, the Saracen cavalier, when he had approached towards the Christian within twice the length of his lance, wheeled his steed to the left with inimitable dexterity, and rode twice round his antagonist, who turning without quitting his ground, and presenting his front constantly to his enemy, frustrated his attempts to attack him on an unguarded point; so that the Saracen, wheeling his horse, was fain to retreat to the distance of a hundred yards.

A second time, like a hawk attacking a heron, the heathen renewed the charge, and a second time was fain to retreat without coming to a close struggle. A third time he approached in the same manner, when the Christian knight, desirous to terminate this illusory warfare, in which he might at length have been worn out by the activity of his foeman, suddenly seized the mace which hung at his saddle-bow, and, with a strong hand and unerring aim, hurled it against the head of the emir; for such, and not less, his enemy appeared.

The Saracen was just aware of the formidable missile in time to interpose his light buckler betwixt the mace and his head; but the violence of the blow forced the buckler down on his turban, and though that defence also contributed to deaden its violence, the Saracen was beaten from his horse. Ere the Christian could avail himself of this mishap, his nimble foeman sprang from the ground, and, calling on his steed, which instantly returned to his side, he leaped into his seat without touching the stirrup, and regained all the advantage of which the Knight of the Leopard hoped to deprive him.

But the latter had in the meanwhile recovered his mace, and the Eastern cavalier, who remembered the strength and dexterity with which his antagonist had aimed it, seemed to keep cautiously out of reach of that weapon, of which he had so lately felt the force; while he showed his purpose of waging a distant warfare with missile weapons of his own. Planting his long spear in the sand, at a distance from the scene of combat, he strung with great address a short bow, which he carried at his back, and putting his horse to the gallop, once more described two or three circles of a wider extent than formerly, in the course of which he discharged six arrows at the Christian with such unerring skill, that the goodness of his harness alone saved him

from being wounded in as many places. The seventh shaft apparently found a less perfect part of the armor, and the Christian dropped heavily from his horse.

But what was the surprise of the Saracen, when, dismounting to examine the condition of his prostrate enemy, he found himself suddenly within the grasp of the European, who had had recourse to this artifice to bring his enemy within his reach. Even in this deadly grapple, the Saracen was saved by his agility and presence of mind. He unloosed the sword belt, in which the Knight of the Leopard had fixed his hold, and thus eluding his fatal grasp, mounted his horse, which seemed to watch his motions with the intelligence of a human being, and again rode off. But in the last encounter the Saracen had lost his sword and his quiver of arrows, both of which were attached to the girdle, which he was obliged to abandon. He had also lost his turban in the struggle. These disadvantages seemed to incline the Moslem to a truce: he approached the Christian with his right hand extended, but no longer in a menacing attitude.

"There is truce betwixt our nations," he said, in the lingua franca commonly used for the purpose of communication with the crusaders; "wherefore should there be war betwixt thee and me? Let there be peace betwixt us."

"I am well contented," answered he of the Couchant Leopard; "but what security dost thou offer that thou wilt observe the truce?"

"The word of a follower of the prophet was never broken," answered the emir. "It is thou, brave Nazarene, from whom I should demand security, did I not know that treason seldom dwells with courage."

The crusader felt that the confidence of the Moslem made him ashamed of his own doubts.

"By the cross of my sword," he said, laying his hand on the weapon as he spoke, "I will be true companion to thee, Saracen, while our fortune wills that we remain in company together."

"By Mohammed, prophet of God, and by Allah, God of the prophet," replied his late foeman, "there is no treachery in my heart towards thee. And now wend we to yonder fountain, for the hour of rest is at hand, and the stream had hardly touched my lip when I was called to battle by thy approach."

The Knight of the Couchant Leopard yielded a ready and courteous assent; and the late foes, without an angry look or gesture of doubt, rode side by side to the little cluster of palm-trees.
—SCOTT.

THE BARONS SIGNING THE MAGNA CHARTA.

MAGNA CHARTA.

(A.D. 1215.)

JOHN probably did not stretch his authority beyond the limits to which his predecessors had extended theirs; but his tyranny was more continuous, insolent, and unbearable. His barons, long disaffected to his sway, determined upon having the royal power restrained within fixed limits, with their own rights defined in a legal instrument; and a secret confederacy was formed to attain this object by force of arms, if necessary. The compact to this effect was made at St Edmundsbury, on November 20, 1214, and the parties were severally bound to it by an oath, sworn at the high altar of the abbey. Early in the following year, the

confederates laid their demands by a deputation before the king, who stipulated for time to consider the proposals, and obtained a respite till the close of Easter. In the interim, both parties prepared for war, the barons collecting their vassals, and John inviting the aid of foreign mercenaries.

At the expiration of the appointed time, about the middle of April 1215, the barons appeared at Stamford, in Lincolnshire, with a numerous army, and marched to Bradsley, in Northamptonshire, in the neighborhood of the king, who was at Oxford. All concession on his part being refused, the barons formally renounced their allegiance, and chose Robert Fitz-Walter their general, under the title of marshal of "the army of God and of holy Church. They despatched summonses to their peers who still adhered to the royal cause, or had remained neutral, requiring them to take up arms to secure the liberties of the people, and proceeded to ally themselves with the inhabitants of the towns, aware that the sympathies of the free burghers of England were with them, and that their influence would be decisive in the struggle. Northampton, with a royal castle and substantial walls, offered a successful resistance; but Bedford opened its gates, and the citizens of London received with open arms the popular leaders. They entered the city by Aldgate, on Sunday, May 17, John having retired to Odiham, in Hampshire, losing adherents daily, till only seven knights remained in his retinue. He now saw the hopelessness of his cause, and signified his willingness to grant all that was demanded of him. The two parties agreed to meet at Runnymede, a plain on the southern bank of the Thames, between Staines and Windsor, in order to arrange their differences. There seem to have been long and violent discussions while the barons were at Staines and the king at Windsor; for not until three weeks after the negotiations first opened, did he finally submit to the demands of the nation. On Monday, June 15, the conferences opened at Runnymede: they terminated on the following Friday, when the articles of agreement, called MAGNA CHARTA, were signed and sealed, June 19, 1215.

This important document, "the Great Charter of the Common Liberties," embraces sixty articles, expressed in a clear, terse, and authoritative manner, apparently drawn up in form by Archbishop Langton. The barons have been charged with selfishly contemplating their own interests; but it cannot be sustained by

evidence; for the franchises of the towns were secured, the liberty of every freeman was placed under protection, and, though villeinage, or serfdom, was not abolished, redress was offered to the hardships of the serfs. The authors of the charter acted in no exclusive spirit. They secured some privilege for all classes of the community, while laying a foundation for the equal distribution of civil rights, and left the essential prerogatives of the crown untouched, while seeking the advancement of the subject. The free principles recognised were, indeed, grossly violated by subsequent monarchs, but the legal document embodying them remained; and after many years of patience, with occasional sharp strife, its practical observance was forced upon the crown by the people. Magna Charta has been justly called the keystone of English liberty, and the rock upon which our free institutions, as gradually evolved in subsequent times, have been based. —THOMAS MILNER.

THE ORIGIN OF THE ENGLISH NATION.

THE great-grandsons of those who had fought under William and the great-grandsons of those who had fought under Harold, began to draw near to each other in friendship; and the first pledge of their reconciliation was the Great Charter, won by their united exertions, and framed for their common benefit. Here commences the history of the English nation. The history of the preceding events is the history of wrongs inflicted and sustained by various tribes, which, indeed, all dwelt on English ground, but which regarded each other with aversion such as has scarcely ever existed between communities separated by physical barriers. For even the mutual animosity of countries at war with each other is languid when compared with the animosity of nations which, morally separated, are yet locally intermingled. In no country has the enmity of race been carried further than in England. In no country has that enmity been more completely effaced. The stages of the process by which the hostile elements were melted down into one homogeneous mass are not accurately known to us. But it is certain that, when John became king, the distinction between Saxons and Normans was strongly marked, and that before the end of the reign of his grandson it had almost disappeared. In the time of Richard I., the ordinary imprecation of a Norman

gentleman was, "May I become an Englishman!" His ordinary form of indignant denial was, "Do you take me for an Englishman?" The descendant of such a gentleman a hundred years later was proud of the English name. The sources of the noblest rivers which spread fertility over continents, and bear richly laden fleets to the sea, are to be sought in wild and barren mountain tracts, incorrectly laid down in maps, and rarely explored by travellers. To such a tract the history of our country during the thirteenth century may not inaptly be compared. Sterile and obscure as is that portion of our annals, it is there that we must seek for the origin of our freedom, our prosperity, and our glory. Then it was that the great English people was formed; that the national character began to exhibit those peculiarities which it has ever since retained; and that our fathers became emphatically islanders,—islanders not merely in geographical position, but in their politics, their feelings, and their manners. Then first appeared with distinctness that constitution which has ever since, through all changes, preserved its identity; that constitution of which all the other free constitutions in the world are copies, and which, in spite of some defects, deserves to be regarded as the best under which any great society has ever yet existed during many ages. Then it was that the House of Commons, the archetype of all the representative assemblies which now meet either in the Old or in the New World, held its first sittings. Then it was that the common law rose to the dignity of a science, and rapidly became a not unworthy rival of the imperial jurisprudence. Then it was that the courage of those sailors who manned the rude barks of the Cinque Ports first made the flag of England terrible on the seas. Then it was that the most ancient colleges which still exist at both the great national seats of learning were founded. Then was formed that language, less musical, indeed, than the languages of the south, but in force, in richness, in aptitude for all the highest purposes of the poet, the philosopher, and the orator, inferior to the tongue of Greece alone. Then, too, appeared the first dawn of that noble literature, the most splendid and the most durable of the many glories of England.

—MACAULAY.

YE MARINERS OF ENGLAND.

Ye mariners of England!
That guard our native seas;
Whose flag has braved a thousand years,
The battle and the breeze!
Your glorious standard launch again
To match another foe!
And sweep through the deep
While the stormy winds do blow;
While the battle rages loud and long,
And the stormy winds do blow.

The spirits of your fathers
Shall start from every wave!
For the deck it was their field of fame,
And ocean was their grave;
Where Blake and mighty Nelson fell
Your manly hearts shall glow,
As ye sweep through the deep,
While the stormy winds do blow;
While the battle rages loud and long,
And the stormy winds do blow.

Britannia needs no bulwarks,
No towers along the steep;
Her march is o'er the mountain-waves,
Her home is on the deep.
With thunders from her native oak
She quells the floods below,
As they roar on the shore
When the stormy winds do blow;
When the battle rages loud and long,
And the stormy winds do blow.

The meteor flag of England
Shall yet terrific burn;
Till danger's troubled night depart,
And the star of peace return.
Then, then, ye ocean-warriors!
Our song and feast shall flow
To the fame of your name,
When the storm has ceased to blow;
When the fiery fight is heard no more,
And the storm has ceased to blow!

—Campbell.

FALL OF CONSTANTINOPLE.

(A.D. 1453.)

THE noblest of the Greeks, and the bravest of the allies, were summoned to the palace, to prepare them, on the evening of the 28th, for the duties and dangers of the general assault. The last speech of Palæologus was the funeral oration of the Roman empire: he promised, he conjured, and he vainly attempted to infuse the hope which was extinguished in his own mind. In this world all was comfortless and gloomy; and neither the gospel nor the Church have proposed any conspicuous recompence to the heroes who fall in the service of their country. But the example of their prince, and the confinement of a siege, had armed these warriors with the courage of despair; and the pathetic scene is described by the feelings of the historian Pharanza, who was himself present at this mournful assembly. They wept, they embraced; regardless of their families and fortunes, they devoted their lives; and each commander, departing to his station, maintained all night a vigilant and anxious watch on the rampart. The emperor, and some faithful companions, entered the dome of St. Sophia, which in a few hours was to be converted into a mosque, and devoutly received, with tears and prayers, the sacrament of the holy communion. He reposed some moments in the palace, which resounded with cries and lamentations; solicited the pardon of all whom he might have injured; and mounted on horseback to visit the guards, and explore the motions of the enemy. The distress and fall of the last Constantine are more glorious than the long prosperity of the Byzantine Cæsars.

In the confusion of darkness, an assailant may sometimes succeed; but in this great and general attack, the military judgment and astrological knowledge of Mohammed advised him to expect the morning, the memorable 29th of May, in the fourteen hundred and fifty-third year of the Christian era. The preceding night had been strenuously employed: the troops, the cannon, and the fascines were advanced to the edge of the ditch, which in many parts presented a smooth and level passage to the breach; and his fourscore galleys almost touched with their prows and their scaling ladders the less defensible walls of the harbor. Under pain of death, silence was enjoined; but the physical laws of motion and sound are not obedient to discipline or fear;

each individual might suppress his voice, and measure his footsteps; but the march and labor of thousands must inevitably produce a strange confusion of dissonant clamors, which reached the ears of the watchmen of the towers. At daybreak, without the customary signal of the morning gun, the Turks assaulted the city by sea and land; and the similitude of a turned or twisted thread has been applied to the closeness and continuity of their line of attack. The foremost ranks consisted of the refuse of the host, a voluntary crowd, who fought without order or command; of the feebleness of age or childhood, of peasants and vagrants, and of all who had joined the camp in the blind hope of plunder and martyrdom. The common impulse drove them onwards to the wall; the most audacious to climb were instantly precipitated; and not a dart, not a bullet of the Christians, was idly wasted on the accumulated throng. But their strength and ammunition were exhausted in this laborious defence; the ditch was filled with the bodies of the slain; they supported the footsteps of their companions: and of this devoted vanguard, the death was more serviceable than the life. Under their respective bashaws and sanjaks, the troops of Anatolia and Romania were successively led to the charge: their progress was various and doubtful; but after a conflict of two hours, the Greeks still maintained and improved their advantage; and the voice of the emperor was heard, encouraging his soldiers to achieve, by a last effort, the deliverance of their country. In that fatal moment the janizaries arose, fresh, vigorous, and invincible. The sultan himself on horseback, with an iron mace in his hand, was the spectator and judge of their valor; he was surrounded by ten thousand of his domestic troops, whom he reserved for decisive occasions; and the tide of battle was directed and impelled by his voice and eye. His numerous ministers of justice were posted behind the line, to urge, to restrain, to punish; and if danger was in the front, shame and inevitable death were in the rear of the fugitives. The cries of fear and of pain were drowned in the martial music of drums, trumpets, and attaballs; and experience has proved that the mechanical operation of sounds, by quickening the circulation of the blood and spirits, will act on the human machine more forcibly than the eloquence of reason and honor. From the lines, the galleys, and the bridge, the Ottoman artillery thundered on all sides; and the camp and city, the Greeks and the Turks, were involved in a cloud of smoke, which could only be dispelled by the final deliverance or

destruction of the Roman Empire. The single combats of the heroes of history or fable amuse our fancy and engage our affections; the skilful evolutions of war may inform the mind and improve a necessary, though a pernicious, science; but in the uniform and odious pictures of a general assault, all is blood, and horror, and confusion; nor shall I strive, at the distance of three centuries and a thousand miles, to delineate a scene of which there could be no spectators, and of which the actors themselves were incapable of forming any just or adequate idea.

The immediate loss of Constantinople may be ascribed to the bullet, or arrow, which pierced the gauntlet of John Justiniani. The sight of his blood, and the exquisite pain, appalled the courage of the chief whose arms and counsels were the firmest rampart of the city. As he withdrew from his station in quest of a surgeon, his flight was perceived and stopped by the indefatigable emperor. "Your wound," exclaimed Palæologus, "is slight; the danger is pressing; your presence is necessary; and whither will you retire?" "I will retire," said the trembling Genoese, "by the same road which God has opened to the Turks;" and at these words he hastily passed through one of the breaches of the inner wall. By this pusillanimous act, he stained the honors of a military life; and the few days which he survived in Galata, or the isle of Chios, were imbittered by his own and the public reproach. His example was imitated by the greatest part of the Latin auxiliaries, and the defence began to slacken when the attack was pressed with redoubled vigor. The numbers of the Ottomans was fifty, perhaps a hundred, times superior to that of the Christians; the double walls were reduced by the cannon to a heap of ruins; in a circuit of several miles, some places must be found more easy of access, or more feebly guarded; and if the besiegers could penetrate at a single point, the whole city is irrecoverably lost. The first who deserved the Sultan's reward was Hassan the janizary, of gigantic stature and strength. With his scimitar in one hand and his buckler in the other, he ascended the outward fortification: of the thirty janizaries who were emulous of his valor, eighteen perished in the bold adventure. Hassan and his twelve companions had reached the summit; the giant was precipitated from the rampart; he rose on one knee, and was again oppressed by a shower of darts and stones. But his success had proved that the achievement was possible; the walls and towers were instantly covered with

a swarm of Turks, and the Greeks, now driven from their vantage-ground, were overwhelmed by increasing multitudes. Amidst these multitudes, the emperor, who accomplished all the duties of a general and a soldier, was long seen, and finally lost. The nobles, who fought round his person, sustained till their last breath the honorable names of Palæologus and Cantacuzene: his mournful exclamation was heard, "Cannot there be found a Christian to cut off my head?" and his last fear was that of falling alive into the hands of the infidels. The prudent despair of Constantine cast away the purple; amidst the tumult he fell by an unknown hand, and his body was buried under a mountain of the slain. After his death, resistance and order were no more; the Greeks fled towards the city, and many were pressed and stifled in the narrow pass of the gate of St. Romanus. The victorious Turks rushed through the breaches of the inner wall, and as they advanced into the streets they were soon joined by their brethren, who had forced the gate Phenar on the side of the harbor. In the first heat of their pursuit, about two thousand Christians were put to the sword; but avarice soon prevailed over cruelty, and the victors acknowledged that they should immediately have given quarter if the valor, of the emperor and his chosen bands had not prepared them for a similar opposition in every part of the capital. It was thus, after a siege of fifty-three days, that Constantinople was irretrievably subdued by the arms of Mohammed II. Her empire only had been subverted by the Latins: her religion was trampled in the dust by the Moslem conquerors. —GIBBON.

FIRST VOYAGE OF COLUMBUS.

WHAT did the ocean's waste supply
To soothe the mind or please the eye?
The rising morn, through dim mist breaking,
The flecker'd east with purple streaking;
The mid-day cloud through thin air flying,
With deeper blue the blue sea dyeing.
Long ridgy waves their white manes rearing,
And in the broad gleam disappearing;
The broaden'd, blazing sun declining,
And western waves like fire-floods shining;
The sky's vast dome to darkness given,
And all the glorious host of heaven.

Full oft upon the deck—while others slept—

To mark the bearing of each well-known star,
That shone aloft or on the horizon far,
The anxious chief his lonely vigil kept.
The mournful wind, the hoarse wave breaking near,
The breathing groans of sleep, the plunging lead,
The steersman's call, and his own stilly tread,
Are all the sounds of night that reach his ear.

But soon his dauntless soul, which naught could bend,
Nor hope delay'd, nor adverse fate subdue,—
With a more threatening danger must contend
Than storm or wave—a fierce and angry crew.
"Dearly," say they, "may we those visions rue
Which lured us from our native land,
A wretched, lost, devoted band,
Led on by hope's delusive gleam,
The victim of a madman's dream;
Nor gold shall e'er be ours, nor fame,
Not even the remnant of a name
On some rude-letter'd stone to tell
On what strange coast our wreck befell.
For us no requiem shall be sung,
Nor prayer be said, nor passing knell
In holy church be rung."

To thoughts like these all forms give way
Of duty to a leader's sway;
And, as he moves—ah! wretched cheer,—
Their mutter'd curses reach his ear.
But all undaunted, firm, and sage,
He scorns their threats, yet thus he soothes their rage:
"That to some nearing coast we bear,
How many cheering signs declare!
Wayfaring birds the blue air ranging,
Their shadowy line to blue air changing,
Pass o'er our heads in frequent flocks;
While sea-weed from the parent rocks,
With fibry roots, but newly torn,
In wreaths are on the clear wave borne.
Nay, has not e'en the drifting current brought
Things of rude art, by human cunning wrought.
Be yet two days your patience tried,
And if no shore is then descried,
E'en turn your dastard prows again,
And cast your leader to the main."

And thus a while, with steady hand,
He kept in check a wayward band,
Who but with half-express'd disdain,
Their rebel spirit could restrain.

So pass'd the day—the night—the second day,
With its red setting sun's extinguish'd ray.

Dark, solemn midnight coped the ocean wide,
When from his watchful stand Columbus cried,
"A light, a light!"—blest sounds that rang
In every ear. At once they sprang
With haste aloft, and, peering bright,
Descried afar the blessed sight.

"It moves! it slowly moves, like ray
Of torch that guides some wanderer's way!
Lo! other lights, more distant, seeming
As if from town or hamlet streaming!
'Tis land, 'tis peopled land!—man dwelleth there,
And Thou, O God of heaven, hast heard Thy servant's prayer!"

Returning day gave to their view
The distant shore and headlands blue
Of long-sought land. Then rose on air
Loud shouts of joy, mix'd wildly strange
With voice of weeping and of prayer,
Expressive of their blessed change
From death to life, from fierce to kind,
From all that sinks to all that elevates the mind.

Those who, by faithless fear ensnared,
Had their brave chief so rudely dared,
Now, with keen self-upbraiding stung,
With every manly feeling wrung,
Repentant tears, looks that entreat,
Are kneeling humbly at his feet:
"Pardon our blinded, stubborn guilt;
Oh, henceforth make us what thou wilt!
Our hands, our hearts, our lives are thine,
Thou wondrous man, led on by power divine!"

Columbus led them to the shore
Which ship had never touch'd before;
And there he knelt upon the strand,
To thank the God of sea and land;
And there, with mien and look elate,
Gave welcome to each toil-worn mate.
And lured with courteous signs of cheer,
The dusky natives gathering near,
Who on them gazed with wondering eyes,
As mission'd spirits from the skies.
And there did he possession claim,
In royal Isabella's name.

—JOANNA BAILLIE.

INTERVIEW OF COLUMBUS WITH THE SPANISH SOVEREIGNS.

RETURN OF COLUMBUS AFTER HIS FIRST VOYAGE.

(A.D. 1493.)

In the spring of 1493, while the court was still at Barcelona, letters were received from Christopher Columbus, announcing his return to Spain, and the successful achievement of his great enterprise, by the discovery of land beyond the western ocean. The delight and astonishment raised by this intelligence were proportioned to the scepticism with which his object had been originally viewed. The sovereigns were now filled with a natural impatience to ascertain the extent and other particulars of the important discovery; and they transmitted instructions to the admiral to repair to Barcelona as soon as he should have made the preliminary arrangements for the further prosecution of his enterprise.

The great navigator had succeeded, as is well known, after a voyage the natural difficulties of which had been much augmented by the distrust and mutinous spirit of his followers, in descrying land on Friday, the 12th of October 1492. After some months spent in exploring the delightful regions now for the first time thrown open to the eyes of a European, he embarked in the month of January 1493 for Spain. One of his vessels had previously foundered, and another had deserted him; so that he was left alone to retrace his course across the Atlantic.

After a most tempestuous voyage, he was compelled to take shelter in the Tagus, sorely against his inclination. He experienced, however, the most honorable reception from the Portuguese monarch, John II, who did ample justice to the great qualities of Columbus, although he had failed to profit by them. After a brief delay, the admiral resumed his voyage, and, crossing the bar of Saltes, entered the harbor of Palos about noon on the 15th of March 1493,—being exactly seven months and eleven days since his departure from that port.

Great was the agitation in the little community of Palos, as they beheld the well-known vessel of the admiral re-entering their harbor. Their desponding imaginations had long since consigned him to a watery grave; for, in addition to the preternatural horrors which hung over the voyage, they had experienced the most stormy and disastrous winter within the recollection of the oldest mariners. Most of them had relatives or friends on board. They thronged immediately to the shore, to assure themselves with their own eyes of the truth of their return.

When they beheld their faces once more, and saw them accompanied by the numerous evidences which they brought back of the success of the expedition, they burst forth in acclamations of joy and gratulation. They awaited the landing of Columbus, when the whole population of the place accompanied him and his crew to the principal church, where solemn thanksgivings were offered up for their return, while every bell in the village sent forth a joyous peal in honor of the glorious event.

The admiral was too desirous of presenting himself before the sovereigns to protract his stay long at Palos. He took with him on his journey specimens of the multifarious products of the newly-discovered regions. He was accompanied by several of the native islanders, arrayed in their simple barbaric costume, and decorated, as he passed through the principal cities, with collars, bracelets, and other ornaments of gold, rudely fashioned. He exhibited also considerable quantities of the same metal in dust or in crude masses, numerous vegetable exotics possessed of aromatic or medicinal virtue, and several kinds of quadrupeds unknown in Europe, and birds whose varieties of gaudy plumage gave a brilliant effect to the pageant.

The admiral's progress through the country was everywhere impeded by the multitudes thronging forth to gaze at the extraordinary spectacle, and the more extraordinary man, who, in the emphatic language of that time—which has now lost its force

from its familiarity—first revealed the existence of a "NEW WORLD." As he passed through the busy, populous city of Seville, every window, balcony, and house-top which could afford a glimpse of him is described to have been crowded with spectators.

It was the middle of April before Columbus reached Barcelona. The nobility and cavaliers in attendance on the court, together with the authorities of the city, came to the gates to receive him, and escorted him to the royal presence. Ferdinand and Isabella were seated, with their son Prince John, under a superb canopy of state, awaiting his arrival. On his approach, they rose from their seats, and extending their hands to him to salute, caused him to be seated before them. These were unprecedented marks of condescension to a person of Columbus's rank in the haughty and ceremonious court of Castile.

It was, indeed, the proudest moment in the life of Columbus. He had fully established the truth of his long-contested theory, in the face of argument, sophistry, sneer, scepticism, and contempt. He had achieved this not by chance, but by calculation, supported through the most adverse circumstances by consummate conduct. The honors paid him, which had hitherto been reserved only for rank, or fortune, or military success, purchased by the blood and tears of thousands, were, in his case, a homage to intellectual power successfully exerted in behalf of the noblest interests of humanity.

After a brief interval, the sovereigns requested from Columbus a recital of his adventures. His manner was sedate and dignified, but warmed by the glow of natural enthusiasm. He enumerated the several islands which he had visited, expatiated on the temperate character of the climate, and the capacity of the soil for every variety of agricultural production, appealing to the samples imported by him as evidence of their natural fruitfulness.

He dwelt more at large on the precious metals to be found in these islands, which he inferred less from the specimens actually obtained, than from the uniform testimony of the natives to their abundance in the unexplored regions of the interior. Lastly, he pointed out the wide scope afforded to Christian zeal in the illumination of a race of men whose minds, far from being wedded to any system of idolatry, were prepared by their extreme simplicity for the reception of pure and uncorrupted doctrine.

The last consideration touched Isabella's heart most sensibly;

and the whole audience, kindled with various emotions by the speaker's eloquence, filled up the perspective with the gorgeous coloring of their own fancies, as ambition, or avarice, or devotional feeling predominated in their bosoms. When Columbus ceased, the king and queen, together with all present, prostrated themselves on their knees in grateful thanksgivings, while the solemn strains of the *Te Deum* were poured forth by the choir of the royal chapel, as in commemoration of some glorious victory.

—Prescott.

EDINBURGH AFTER FLODDEN.

(A.D. 1513.)

News of battle! news of battle!
Hark! 'tis ringing down the street;
And the archways and the pavement
Bear the clang of hurrying feet.
News of battle! who hath brought it?
News of triumph! Who should bring
Tidings from our noble army,
Greetings from our gallant king?

All last night we watch'd the beacons
Blazing on the hills afar,
Each one bearing, as it kindled,
Message of the open'd war.
All night long the northern streamers
Shot across the trembling sky;
Fearful lights, that never beacon
Save when kings or heroes die.

News of battle! who hath brought it?
All are thronging to the gate;
"Warder—warder! open quickly!
Man—is this a time to wait?"
And the heavy gates are open'd:
Then a murmur long and loud;
And a cry of fear and wonder
Bursts from out the bending crowd,
For they see in batter'd harness
Only one hard-stricken man;
And his weary steed is wounded,
And his cheek is pale and wan:
Spearless hangs a bloody banner
In his weak and drooping hand—
What! can that be Randolph Murray,
Captain of the city band?

Round him crush the people, crying,
"Tell us all—oh, tell us true!
Where are they who went to battle,
Randolph Murray, sworn to you?
Where are they, our brothers—children?
Have they met the English foe?
Why art thou alone, unfollow'd?
Is it weal, or is it woe?"
Like a corpse the grisly warrior
Looks out from his helm of steel;
But no word he speaks in answer—
Only with his armèd heel
Chides his weary steed, and onward
Up the city streets they ride;
Fathers, sisters, mothers, children,
Shrieking, praying by his side.

"By the God that made thee, Randolph!
Tell us what mischance has come."
Then he lifts his riven banner,
And the asker's voice is dumb.

The elders of the city
Have met within their hall—
The men whom good King James had charged
To watch the tower and wall.
"Your hands are weak with age," he said,
"Your hearts are stout and true:
So bide ye in the Maiden Town,
While others fight for you.
My trumpet from the border side
Shall send a blast so clear,
That all who wait within the gate
That stirring sound may hear.
Or if it be the will of Heaven
That back I never come,
And if, instead of Scottish shouts,
Ye hear the English drum,—
Then let the warning bells ring out,
Then gird you to the fray,
Then man the walls like burghers stout,
And fight while fight you may.
'Twere better that in fiery flame
The roof should thunder down,
Than that the foot of foreign foe
Should trample in the town!"

Then in came Randolph Murray,—
His step was slow and weak,
And, as he doff'd his dinted helm,
The tears ran down his cheek:
They fell upon his corselet,
And on his mailèd hand,
As he gazed around him wistfully,
Leaning sorely on his brand.
And none who then beheld him
But straight were smote with fear,
For a bolder and a sterner man
Had never couch'd a spear.
They knew so sad a messenger
Some ghastly news must bring,
And all of them were fathers,
And their sons were with the king.
And up then rose the provost—
A brave old man was he,
Of ancient name, and knightly fame,
And chivalrous degree.

. . . . . .

Oh, woeful now was the old man's look,
And he spake right heavily—
"Now, Randolph, tell thy tidings,
However sharp they be!
Woe is written on thy visage,
Death is looking from thy face:
Speak! though it be of overthrow—
It cannot be disgrace!"

Right bitter was the agony
That wrung that soldier proud:
Thrice did he strive to answer,
And thrice he groan'd aloud.
Then he gave the riven banner
To the old man's shaking hand,
Saying—"That is all I bring ye
From the bravest of the land!
Ay! ye may look upon it—
It was guarded well and long,
By your brothers and your children,
By the valiant and the strong.
One by one they fell around it,
As the archers laid them low,
Grimly dying, still unconquer'd,
With their faces to the foe.
Ay! ye may well look upon it—
There is mere than honor there,
Else, be sure, I had not brought it
From the field of dark despair.
Never yet was royal banner
Steep'd in such a costly dye;
It hath lain upon a bosom
Where no other shroud shall lie.

Sirs! I charge you, keep it holy,
Keep it as a sacred thing,
For the stain you see upon it
Was the life-blood of your king!"
Woe, woe, and lamentation!
What a piteous cry was there!
Widows, maidens, mothers, children,
Shrieking, sobbing in despair!
. . . . . .
"Oh the blackest day for Scotland
That she ever knew before!
Oh our king! the good, the noble,
Shall we see him never more?
Woe to us, and woe to Scotland!
Oh our sons, our sons and men!
Surely some have 'scaped the Southron,
Surely some will come again!"
Till the oak that fell last winter
Shall uprear its shatter'd stem—
Wives and mothers of Dunedin—
Ye may look in vain for them!

—Aytoun.

DISCOVERY OF NEWFOUNDLAND.

(A.D. 1497.)

In the spring of the year 1497, a small squadron of ships sailed from Bristol, in search of a passage to India by the north-west. Two men of Venetian origin, John Cabot and his son Sebastian, a youth of twenty years of age, undertook their guidance. After a toilsome voyage of many weeks, they entered a region of vast banks, fogs, and mists, but continued on with unshaken hardihood. About three o'clock on the morning of the 24th of June, they reached a land hitherto unnoted in any map or record; sterile and uncultivated, abounding in great white bears and elks. The discoverers called this country by a name signifying "rich in fish," from the numbers which swarmed in the rivers and along the sea-coast. The inhabitants were wild and unfriendly, clothed with the skins of beasts, and painted with a reddish clay.

The Cabots returned to England that year, and it does not appear that any further notice was taken of this country, which the English called Newfoundland, till 1534; when the brave Jacques Cartier, with only sixty men, sailed from St. Malo in two small vessels, under the French flag, and nearly circumnavigated the island. He found it to be a great triangle, of irregular shape, and about nine hundred miles round, with deep indentures and numerous harbors, but with a soil everywhere unfruitful.

Two Englishmen, named Elliott and Thorn, traded there for some years under the protection of Henry VIII., obtaining rich furs from the natives. At length these unhappy men, with a body of their dependants, made a settlement, and determined to remain there over the winter. They knew not what they had

to meet; their provisions failed, none of them survived, and tradition says they ate each other.

The most remarkable among the adventurers who visited these bleak shores, for many years afterwards, was Sir Humphrey Gilbert. He took possession in the name of Queen Elizabeth, but was lost on his return to England: his good brave words in the storm, however, are left us still, "Courage, friends! we are as near heaven here as on the land."

From the beginning of the seventeenth century the French had a settlement at Placentia, on the south coast. In the year 1622, George Calvert landed from England, having with him seeds, grain, and cattle. His settlers were successful, and some of their descendants founded, in a commodious harbor, the capital, St. John's.

At the treaty of Utrecht, Louis XIV. of France gave up his claim to the island, which probably he did not care much about, as his subjects retained the right of fishing. It has ever since remained an English colony, and is at present garrisoned by three companies of infantry. The barren soil and ungenial climate defy the skill and industry of the husbandman: wheat does not grow, the scanty crops of barley and oats rarely ripen; from sheltered places near the towns a moderate supply of potatoes and garden vegetables is forced from the unwilling earth. There are a few cattle, the grasses being plentiful and nutritious. All else, for the use of man, comes from over the sea. During the summer, some of the lakes and bays are rich in short-lived beauty. Few have penetrated into the interior for any distance; the hills, as you advance, rise into mountains, the shrubs into trees; there is an idea that the centre of the island is a great valley, filled with numerous lakes and impassable morasses; none of the rivers are navigable far up the country, and there seems but little to tempt the explorer.

The natives met with in the first discovery were Esquimaux; fierce men of stalwart frame and intractable disposition; their complexion was a dark-red, they were bold hunters and fishers, and of great courage in battle. From the first, they and the white men were deadly foes. The Mic-mac Indians of Nova Scotia and those red men carried on a war of extermination against each other for centuries; each landing, with destructive swoop, on the others' coast, scalping the men, and carrying the women into slavery. The Esquimaux warriors were more frequently victorious, till, in an evil hour, they provoked the wrath

of the pale faces: the rifle and bayonet soon broke their spirit; abandoning the coasts and the hunting-grounds of their fathers, they fled into the dreary forests of the interior; sometimes, in the long winter nights, they crept out from their wild fastnesses, and visited some lonely hamlet with a terrible vengeance. The settlers in return hunted them down like wolves, and, in the course of years, their life of misery reduced their numbers, and weakened their frames so much, that they never ventured to appear; it was known that some few still lingered, but they were almost forgotten.

The winter of 1830 was unusually severe in this country, and prolonged beyond those of former years. Towards its close, a settler was hewing down trees at some distance from one of the remote villages, when two gaunt figures crept out from the neighboring "bush;" with sad cries and imploring gestures they tried to express their prayer for help; the white man, terrified by their uncouth and haggard looks, seized his gun, which unhappily lay at hand, and shot the foremost; the other tossed his lean arms wildly into the air—the woods rang with his despairing shrieks as he rushed away. Since then none of the fallen race have been seen. The emaciated frame of the dead man showed how dire had been their necessity. There is no doubt that the last of the red men perished in that bitter winter.

—WARBURTON'S *Hochelaga.*

NOVA SCOTIA.

WHETHER we regard its age, its eventful history, or the tried loyalty of its inhabitants, we may safely say that few of the British colonies are more worthy of our attention than the province of Nova Scotia. It was first discovered to the modern European by the two Cabots, who sailed under a commission from Henry VIII., and landed upon its shores in 1497, a few years after the discovery of America by Columbus, and some time previous to the discovery of the mainland by that navigator. It was totally neglected till 1583, when Sir Humphrey Gilbert perished in attempting to reach its shores. His brother John succeeded in effecting a landing upon the continent the following year; he died, however, shortly afterwards, and his followers returned to England. It is upon these visits that England founded her right to this colony.

THE CITY OF HALIFAX.

The next European of whom we hear upon these shores was M. de Monts, a French gentleman, who set sail from Havre in 1604 with a commission from Henry IV., appointing him governor of the northern part of the continent under the name of New France. That portion of it which is represented by the provinces of Nova Scotia and New Brunswick was then called Acadia. De Monts founded a settlement at Port Royal, which rapidly progressed, the settlers keeping upon good terms with the aborigines, and being otherwise undisturbed, except on a single occasion when a certain Captain Argall from Virginia made an unprovoked attack upon them.

The successes of the French turned the attention of the English to the Acadian colony, and in 1621, Sir William Alexander, an accomplished gentleman and scholar, obtained from James I. a grant of the whole country. Many Dutch and French adventurers resorted to the province, and an English vessel paid it a visit, but no attempt was made at settlement till the reign of Charles I., who renewed Sir William's charter, and instituted the order of baronets of Nova Scotia, by which name the colony was henceforth to be known. Aided by a French Huguenot named Kirckt, the governor fitted out a few armed vessels, which cap-

tured some French transports on the way, but did nothing toward permanent settlement. Disgusted with his want of success, Sir William Alexander transferred all but Port Royal to Claude de la Tour, a French Protestant. In 1632, however, the foolish treaty of St Germains ceded Nova Scotia with Canada to France; and a company of merchants, incessantly squabbling among themselves, misgoverned it till 1654, when Oliver Cromwell took possession of the province.

By the treaty of Breda it was again ceded to France. On the fresh outbreak of war, Sir William Phipps set sail from Massachusetts, and in 1690 levelled the fortifications of Port Royal, and added Nova Scotia to the government of his province. It remained an appanage of Massachusetts till 1696, when the treaty of Ryswick again restored it to France. No sooner had the French re-entered upon the government of the province, than they adopted measures for its colonization, and largely increased the fur trade and the fisheries. At the same time they despatched piratical expeditions to the shores of New England, and greatly annoyed the British colonists. The people of New England retaliated in 1704 and 1707; the expedition of the former year, under Colonel Church, burning and pillaging the country, and that of the latter being ingloriously foiled by the gallantry of M. Subercuse. In 1710, however, a strong force of four war vessels and nineteen transports, containing five regiments, arrived at Port Royal, and, after a brave defence on the part of the besieged, took possession of the country. By the famous treaty of Utrecht in 1715, Nova Scotia was finally ceded to England, and the name of Acadia blotted out from the map.

General Nicholson, who had led the expedition against Port Royal, the name of which was changed to Annapolis, in honor of Queen Anne, remained in Nova Scotia as governor till 1719, when Colonel Phillips succeeded him. The proximity of Cape Breton, which still remained in possession of the French, the disloyalty of the Acadians, and the frightful ravages of the Indians, gave considerable anxiety to the early government, especially as few English settlers appeared in the country. The Indians, incited by the French, at last committed such atrocities, that large expeditions were undertaken against them. The taking of Louisburg and the Island of St. John by the provincial troops under Colonel Pepperel, put a stop to these outrages for a time. France, however, was determined to strike another blow for her lost provinces, and in 1746 despatched a great fleet from Rochelle, under the command of the Duc d'Anville; but before

having effected anything, the French fleet was broken up by storms, and its crews and soldiers carried off by disease. Shattered and maimed, a small remnant escaped to France. The defeat of Jonquiere's fleet by Admiral Anson secured the province from further molestation.

A plan of systematic colonization was now entered into with vigor, soldiers and seamen receiving grants of land for their services. Chebucto was fixed upon as the harbor of the province, and soon Governor Cornwallis laid out the town of Halifax, so named in honor of the Earl of Halifax, president of the Board of Trade and Plantations. The French and Indians recommenced their ravages, the latter surprising towns and villages and scalping the inhabitants, as at Dartmouth and Lunenburg. The disloyalty of the Acadians occasioned so much uneasiness, that it was deemed necessary, under the government of Major Lawrence, to remove them from the country. They were accordingly called together in the church at Grand Pré and similar places, and transported to the other British American colonies. Many fled to the woods or escaped to the French settlements, their villages being laid waste and their property destroyed. In 1757 a large fleet, commanded by Admiral Holborne, arrived at Halifax from England, with a view of taking possession of Cape Breton and Canada. Owing to various disasters the expedition failed entirely. A short time afterwards, however, a still larger armament, under Admiral Boscawen, accomplished the reduction of Cape Breton; and not long after the conquest of Canada by Wolfe, secured the tranquillity of Nova Scotia. The government, which had hitherto been vested in the Governor and Council, was placed in the hands of a House of Representatives, a constitution was adopted, and the province fairly set upon the high road to prosperity.

By the treaty of Paris in 1763, France relinquished her claims to this province. On the outbreak of the American war, the Nova Scotians proved their firm adherence to the British Crown, and received a large accession to their numbers from the loyal men of the rebellious states. In 1784, Cape Breton was detached from Nova Scotia—with which since its conquest it had been united—and New Brunswick erected into a separate government. In the war of 1812, the marine of Nova Scotia did good service against the Americans, while the operations by land were checked by the humanity of the respective governors of Maine and this province. During the government of Sir James Kempt, Cape Breton was again annexed to Nova Scotia, and has ever since been incorporated with it in government. —CAMPBELL'S *5th Reader.*

VIEW OF ST. JOHN N.B.

NEW BRUNSWICK.

THE history of New Brunswick is embodied in that of Nova Scotia, of which province it formed a part until 1785. The first settlement attempted by the British was in 1762, by a few families from New England, on the river St. John, about fifty miles from its mouth, and was named Maugerville.

These people experienced great misery, and met with many obstacles before they established themselves. The difficulties inseparable from settling in the finest wilderness country in the world, are sufficiently formidable and discouraging, but the hostile spirit of the Indians harassed them still more, and the savages were only at last appeased by the payment of large sums for the wild animals which the English colonists had killed.

During the American war, several other families left New England, and planted themselves on the lands adjoining Maugerville. This district became then the seat of the court of law, and obtained the name of Sunbury.

At the peace of 1783, there were about eight hundred inhabitants in this part of the province. They endured many hardships

before they procured ample means to subsist on ; but it appears, however, that private dissensions and separate interests formed no small share of the evils that prevented their prosperity.

Three thousand persons from Nantucket arrived at the river St. John in the spring succeeding the peace with America. Many of these were men who served during the war ; twelve hundred more from the same place followed during the autumn of the same year. The sufferings of these settlers were extremely severe. They had previously enjoyed all the comforts which a country subdued and cultivated by the endurance and industry of their forefathers afforded, and they had at once to encounter all the horrors of an approaching winter, without houses to shelter them, amid the wilds of New Brunswick. Their sufferings are described as follows by a gentleman now residing at Fredericton, in a small pamphlet descriptive of the province. "The difficulties," he says, "which the first settlers were exposed to, continued for a long time almost insurmountable. On their arrival, they found a few hovels where St. John is now built, the adjacent country exhibiting a most desolate aspect, which was peculiarly discouraging to people who had just left their homes in the beautiful and cultivated parts of the United States. Up the river St. John the country appeared better, and a few cultivated spots were found unoccupied by old settlers. At St. Ann's, where Fredericton is now built, a few scattered French huts were found ; the country all round being a continued wilderness, uninhabited and untrodden, except by the savages and wild animals ; and scarcely had these firm friends of their country (American loyalists) begun to construct their cabins, when they were surprised by the rigors of an untried climate ; their habitations being enveloped in snow before they were tenantable. The climate at that period (from what cause has not yet been satisfactorily ascertained) being far more severe than at present, they were frequently put to the greatest straits for food and clothing to preserve their existence; a few roots were all that tender mothers could at times procure to allay the importunate calls of their children for food. Sir Guy Carleton had ordered their provisions for the first year, at the expense of government ; but, as the country was not much cultivated at that time, food could scarcely be procured on any terms. Frequently had these settlers to go from fifty to one hundred miles, with hand-sleds, or toboggans, through wild woods or on the ice, to procure a precarious supply for their famishing families. The privations

and sufferings of these people almost exceed belief. The want of food and clothing in a wild country was not easily dispensed with, or soon remedied. Frequently in the piercing cold of winter, some of the family had to remain up during the night to keep fire in their huts to prevent the others from freezing. Some very destitute families made use of boards to supply the want of bedding; the father, or some of the older children, remaining up by turns, and warming two suitable pieces of boards, which they applied alternatively to the smaller children to keep them warm, with many similar expedients.

"Many of these loyalists were in the prime of life when they came to this country, and most of them had young families. To establish these, they wore out their lives in toil and poverty, and by their unremitting exertions subdued the wilderness, and covered the face of the country with habitations, villages, and towns. I have not noticed these circumstances as if they were peculiar to the settlers of New Brunswick, but to hold up to the descendants of those sufferers the hardships endured by their parents; and to place in a striking point of view, the many comforts they possess by the suffering perseverance and industry of their fathers.

"Under the judicious and paternal care of Governor Carleton, assisted by several of the leading characters, many of the difficulties of settling an infant and distant country were lessened. The condition of the settlers was gradually ameliorated. The governor himself set a pattern, in which he was followed by several of the leading men in the different offices. A variety of grains and roots were cultivated with success, and considerable progress made in clearing the wilderness."

In 1785, a royal charter was granted to New Brunswick as a distinct province, and the administration confided to Governor Carleton. The safety of property, and the personal protection of the inhabitants, secured the improvement of the country; and its settlements, agriculture, and trade, advanced from this time with little interruption: the inhabitants following such pursuits as necessity directed, or those that were most profitable, or at least agreeable to their inclinations. —J. M'Gregor.

PRINCE EDWARD ISLAND.

PRINCE EDWARD ISLAND lies in a great bay in the Gulf of St. Lawrence, formed by the northern outline of Nova Scotia, New Brunswick, and Cape Breton. It is a hundred and forty miles in length and thirty-four in breadth in the widest part. Northumberland Strait, in some places only nine miles wide, separates it from New Brunswick and Nova Scotia. The area of the island is about two thousand square miles. The features of this country are softer than those of its neighbors; there are no mountains, but gentle and fertile undulations, clothed to the water's edge with valuable woods and rich verdure. The north shore is very beautiful; many cheerful villages and green clearings, with small lakes, shady harbors, and numerous streams, diversify its scenery. In the course of ages, the vast flood of the river St. Lawrence has worked indentations into every part of the coast: there is not a spot of this district more than seven or eight miles distant from some arm of the sea; many of these afford shelter to large ships, driven by stress of weather under its crescent-shaped shore, while all are deep enough for the small vessels used in the coasting trade.

On the south-east of the island stands Charlotte Town, the capital, at the confluence of three rivers, near the end of Hillsborough Bay. This is an excellent and well-defended harbor; the town is, as yet, but small; it contains the public buildings of the island. The neighborhood yields only to Quebec in beauty among the scenes of British North America. Its shores are soft, and partly cleared; the rivers wind gracefully through forests of varied foliage; life is given to the picture by the cheerful town; grandeur and variety by the blue and lofty mountains of Nova Scotia in the distance.

This island was also discovered by Sebastian Cabot in 1497. The French first used it as a fishing station, and began to colonize it about the beginning of the eighteenth century. The settlers took part vigorously against the English, in their endless wars in those countries. When the conquerors of Louisburg took possession of this island of St. John, as it was then called, they found a number of their countrymen's scalps in the French governor's house. At the end of the last century some Scottish emigrants found their way hither, and most of the present inhabitants are their descendants. The late Duke of

Kent, when governor of Nova Scotia, paid great attention to this island; since his time it has improved very much, and its name, in honor of him, was changed to Prince Edward Island.

The land is admirably adapted for pastoral and agricultural purposes, but is denied the mineral wealth of the neighboring districts; ten times the number of people now scattered over its surface would find abundant room and support. There are (in 1845) about eighty schools, and a proportionate number of churches. A governor is appointed by the English crown, and the internal government is the same as in the sister colonies. Two or three newspapers are published in the island, and it is not without its mustard-pot storms of politics. The fisheries of these shores are of great value, but little advantage is taken of this resource. Many ships are built on the island, and sold to the neighboring colonies, but year by year its increasing trade requires a greater number for its own uses. Prince Edward Island is more favored in climate than any other part of North America; it has neither the extremes of heat and cold of Canada, nor the fogs of Nova Scotia and Cape Breton; fevers and consumption are almost unknown; the air is dry and bracing; the sickly and weak, under its salubrious influence, soon become healthy and robust; and the age of fivescore years is often reached in vigor of mind and body. This happy country furnishes plenty, but not wealth: the people are hospitable, moral, and contented. —WARBURTON'S *Hochelaga.*

JACQUES CARTIER

(A.D. 1534.)

I.

In the seaport of St. Malo 'twas a smiling morn in May,
When the Commodore Jacques Cartier to the westward sail'd away;
In the crowded old cathedral all the town were on their knees
For the safe return of kinsmen from the undiscover'd seas;
And every autumn blast that swept o'er pinnacle and pier,
Fill'd manly hearts with sorrow, and gentle hearts with fear.

II.

A year pass'd o'er St. Malo—again came round the day
When the Commodore Jacques Cartier to the westward sail'd away;

But no tidings from the absent had come the way they went,
And tearful were the vigils that many a maiden spent;
And manly hearts were fill'd with gloom, and gentle hearts with fear,
When no tidings came from Cartier at the closing of the year.

III.

But the earth is as the future, it hath its hidden side;
And the captain of St. Malo was rejoicing in his pride
In the forests of the north—while his townsmen mourn'd his loss,
He was rearing on Mount Royal the *fleur-de-lis* and cross;
And when two months were over, and added to the year,
St. Malo hail'd him home again, cheer answering to cheer.

IV.

He told them of a region, hard, iron-bound, and cold,
Nor seas of pearl abounded, nor mines of shining gold;
Where the wind from Thulé freezes the word upon the lip,
And the ice in spring comes sailing athwart the early ship;
He told them of the frozen scene until they thrill'd with fear,
And piled fresh fuel on the hearth to make him better cheer.

V.

But when he changed the strain—he told how soon are cast
In early spring the fetters that hold the waters fast;
How the winter causeway broken is drifted out to sea,
And the rills and rivers sing with pride the anthem of the free;
How the magic wand of summer clad the landscape to his eyes,
Like the dry bones of the just when they wake in Paradise.

VI.

He told them of the Algonquin braves—the hunters of the wild,
Of how the Indian mother in the forest rocks her child;
Of how, poor souls, they fancy in every living thing
A spirit good or evil, that claims their worshipping;
Of how they brought their sick and maim'd for him to breathe upon,
And of the wonders wrought for them through the Gospel of St. John.

VII.

He told them of the river whose mighty current gave
Its freshness for a hundred leagues to Ocean's briny wave;
He told them of the glorious scene presented to his sight,
What time he rear'd the cross and crown on Hochelaga's height,
And of the fortress cliff that keeps of Canada the key,
And they welcomed back Jacques Cartier from his perils o'er the sea.

—Darcy M'Gee.

VIEW OF QUEBEC.

QUEBEC; OR, THE EARLY HISTORY OF CANADA.

Now, while we rest after the long and weary voyage, lend me patience while I tell the old tale of how, and by whom, this fair city came to be built; and why the flag of dear old England floats upon its citadel.

The first European who ever visited these lands was Jacques Cartier. In the month of May 1535, the year after his circumnavigation of Newfoundland, he again sailed from St. Malo with three small ships. He and his followers were blessed by the bishop in the cathedral, received the holy sacrament, and bade farewell to their friends, as if for ever. The little squadron was for a long time dispersed, but met again with great joy on the 26th of July. Having visited Newfoundland, they kept it to the north, and sailed into a large gulf full of islands; they passed on the north side of Anticosti, and, sometimes landing by the way, came at length to the mouth of the Saguenay. By means of two Indians taken in the former voyage, at the Bay of Chaleur, they conversed with the inhabitants, and overcame their terror. These simple people then received them with songs of joy and dances, giving them freely of all the provisions they had. The

adventurers soon gathered that there was a town some days' sail higher up; this, and the river, and the countries round about, the natives called Hochelaga; thither they bent their way. The kind-hearted Indians tried, by entreaties and innocent stratagems, to detain their dangerous guests.

During the voyage up the stream they passed shores of great beauty; the climate was genial, the weather warmer than that of France, and everywhere they met with unsuspicious friendship. They found Hochelaga a fortified town among rich corn-fields, on an island under the shade of a mountain, which they called Mount Royal; time has changed it to Montreal. The old name, like the old people, is well-nigh forgotten. The inhabitants had stores of corn and fish laid up with great care, also tobacco, which Europeans saw here for the first time. The natives were courteous and friendly in their manners, some of them of noble beauty; they bowed to a Great Spirit, and knew of a future state. The king wore a crown, which he transferred to Jacques Cartier; but, when they brought their sick and infirm, trusting to his supernatural power to heal, the Christian soldier only blessed them with the cross, and prayed that Heaven might give them health.

The adventurers returned to France next year, carrying off one of the kings with them, to the great grief of his subjects; he became contented with his lot, but soon after died. This was the first wrong the doomed race suffered from the white men. Four years afterwards, the Sieur de Roberval, graced with many high-sounding titles, and aided by Jacques Cartier, landed at the mouth of the St. Charles River; the inhabitants, mindful of former injury, met the strangers with war instead of peace. Seven miles above Quebec is Cap Rouge; there, three hundred years ago, the French built their first stronghold, to guard themselves from just vengeance; they named it Charlesburg Royal. Their leader, tortured by the dissensions of his followers, soon led them back to France; in 1549, he, with his brave brother, sailed to seek the visionary Cathay, and were heard of no more.

At the end of the sixteenth century, when the gloom of this failure had passed away, Chauvin and Pontgravé opened a fur trade at Tadoussac, without much success. Next followed the Calvinist De Monts, with a little fleet of four sail; his inordinate privileges, and the religious dissensions of his followers, caused his ruin. The worthy Champlain, his successor, founded the city of Quebec in 1608, and cultivated the rich valley of the St.

Charles; with some of his followers he penetrated to the great Lakes of the West, and returned in safety from among their fierce and savage nations. To this vast territory of Canada, he gave the name of New France. For many years the settlers met with great difficulties from the climate and Indians, but adventurers poured in from the old world, and wars and fire-water thinned their foes. Some powerful tribes sought their alliance, serving them to the end with faith and courage. Montreal, Niagara, and other towns were founded, and Quebec was strengthened into the Gibraltar of the West.

The quarrels of the mother countries involved these colonists in constant difficulties with their English neighbors of the south, and their Indian allies added unheard-of horrors to their wars. After many alternate successes, a British army of great force, under the command of General Amherst, invaded Canada in 1759. Ticonderoga fell into his power, and Niagara was won by the division of General Johnson, after a gallant battle. These triumphs were, however, of but little moment, for all knew that on Quebec the fate of Canada depended, and the failure of General Hill, half a century before, had given a lesson of the difficulties of the attack. A large fleet, commanded by Admiral Saunders, carrying an army of seven thousand men, reached the Island of Orleans in the end of June.

For a few years, and for a great purpose, England was given one of those men whose names light up the page of history; he was humble and gentle as a child, graceful in person and manners; raised by transcendent merit in early manhood, he had done high service at Minden and Louisburg: the purpose was accomplished, and the gift resumed at Quebec, when he was about thirty-two years old. This was WOLFE; to him the expedition was intrusted.

He took possession of the island of Orleans, and occupied Point Levi with a detachment. His prospects were not encouraging; the great stronghold frowned down on him from an almost inaccessible position, bristling with guns, defended by Montcalm, with a superior force of a gallant army, and inhabited by a hostile population. Above the city steep banks rendered landing almost impossible; below, the country, for eight miles, was embarrassed by two rivers, many redoubts, and the watchful Indians. A part of the fleet lay above the town, the remainder in the North Channel, between the island of Orleans and Mont-

morenci; each tide floated down fire-ships, but the sailors towed them ashore, and they proved harmless.

The plan which first suggested itself was, to attack by the side of Montmorenci; but this the brave Montcalm was prepared to meet. On the 31st of July, a division of grenadiers landed below the Falls; some of the boats grounded on a shoal, and caused great confusion; so that arrangements, excellent in themselves, were in their result disastrous. The grenadiers, with an indiscreet ardor, advanced against the intrenchments, unformed and unsupported: a steady and valiant defence drove them back, a storm threatening, and the loss being already heavy, the general re-embarked the troops with quiet regularity. The soldiers drooped under their reverse; but there was always one cheerful face—that of their leader. Nevertheless, inward care and labor wasted his weak frame. He wrote to England, sadly and despondingly, for the future was very dark; but he acted on an inspiration. His generals were brave men, and suggested daring plans: he seized the boldest counsel, risked the great venture, and won.

On the night of the 12th September, the fleet approached the shore below the town, as if to force a landing. The troops embarked at one in the morning, and ascended the river for three leagues, when they got into the boats, and floated noiselessly down the stream, passing the sentries unobserved. Where they landed, a steep narrow path wound up the side of the cliff, forming the river's bank. It was defended bravely against them—but in vain. When the sun rose, the army stood upon the plains of Abraham.

Montcalm found he was worsted as a general, but it was still left to him to fight as a soldier. His order of battle was promptly and skilfully made—the regular troops were his left, resting on the bank above the river; the gallant Canadian Seigneurs, with their Provincials, supported by two regiments, formed his right: beyond these, menacing the English left, were clouds of French and Indian skirmishers.

General Townshend met these with four regiments. The Louisburg Grenadiers formed the front of the battle, to the right, resting on the cliff; and there also was Wolfe, exhorting them to be steady, and to reserve their discharge. The French attacked at forty paces; they staggered under the fire, but repaid it well. At length they slowly gave ground. As they fell back,

the bayonet and claymore of the Highlanders broke their ranks, and drove them with great carnage into the town.

At the first, Wolfe had been wounded in the wrist; another shot struck him in the body, but he dissembled his suffering, for his duty was not yet done. Again a ball passed through his breast, and he sank. When they raised him from the ground, he tried with his faint hand to clear the death-mist from his eyes; he could not see how the battle went, but the voice which fell upon his dying ear told him he was immortal.

There is a small monument upon the place of his death, with the date, and this inscription:—"Here died Wolfe, victorious." He was too precious to be left, even on the field of his glory. England, jealous of his ashes, laid them with his fathers', near the town where he was born. The chivalrous Montcalm was also slain. In a lofty situation on Cape Diamond a pillar is erected "To the memory of two illustrious men, Wolfe and Montcalm."

Five days after the battle, Quebec surrendered, on such terms as generous victors give to gallant foes. The news of these events reached home but forty-eight hours later than the first discouraging despatch, and spread universal joy for the great triumph, and sorrow for its price. Throughout all broad England were illuminations and songs of triumph, except in one country village; for there Wolfe's widowed mother mourned her only child.

This is the story of Quebec nearly a hundred years ago, and the reason why that flag of dear Old England floats above its citadel. —Warburton's *Hochelaga.*

LAKE ONTARIO AND THE THOUSAND ISLANDS.

Come, stand with us on this bold height, in the shadow of that column which marks the death-scene of one of England's noblest soldiers. The air is still and clear, and the distant voice of the great cataract floats low and sullenly down the rocky gorges of the Niagara. Westward spreads a noble expanse of champaign country, beautifully wooded, and dotted with numerous homesteads. To the right rise the wooded heights of the American shore, and at your feet rolls the wave that had its cradle thousands of miles away in the wild heart of the Rocky Mountains—that swept through untrodden forests, and down nameless water-

falls, till it sparkled on the ocean bosom of Superior—danced over the white rapids of the Saut Ste. Marie into the broad Huron—kissed the haunted shores of the isles of the Manitou—mirrored the white walls of Detroit, and the gliding barks of the St. Clair, and rested a while in the arms of Erie, before its rush through the rainbow-arch and the storm-cloud into the boiling gulf of Niagara. Watch the course of the noble river. It is spread beneath us as in a map, tracing its wide boundary between the two great countries, and winding towards Ontario, the last of the mighty brotherhood of the Lakes.

Beneath us, in the current of the broad river, floats that pioneer of American civilization—a steamboat. Let us place ourselves on her deck, and accompany her on her lakeward voyage. As we leave the wild mountain-gorge of Queenston, the scenery becomes softer, and the river banks decrease in height. We are soon at the point where this mighty stream melts into the wide bosom of Ontario, and the last and fairest of the great lakes lies before us, sparkling in the summer sunlight. The stars and stripes are floating in the light breeze to the right, and the meteor flag waves over a small fortalice on the left, and we emerge from the guarded entrance of the boundary river into the broad "neutral ground" of Ontario. White sails are scattered over the bright waters, and here and there the light thread of smoke in the clear heaven tells where a steamer is wheeling her rapid way. It is difficult for any one whose ideas of a lake have been formed from the Windermeres, Neaghs, Katrines, or Lemans of European lands, to fancy old Ontario a mere fresh-water pond, and not a recognized branch of the everlasting ocean. Populous cities encircle its banks, and rivers that drain half a continent empty into its wide basin. Far away to the west the eye can trace the point where the northern and southern shores meet beneath the green crescent of the Burlington Heights, where the beautiful city of Hamilton lies in its amphitheatre of hills. To the east the eye sees nothing but the usual ocean prospect of the mingling blue of wave and heaven. And while our vessel is ploughing her swift path to the northern shore, let us follow with still greater swiftness the broad lake-stream in its eastern journey.

For more than two hundred miles it spreads from its western boundary till it narrows once more into reasonable dimensions, and is again designated as "the river." The Genesee, the Oswego, the Trent, and a hundred minor streams, have poured their tributes into its lap; and the narrowing shores north and south

are again circumscribing its sweep. It has passed the bold ramparts of Fort Henry, and the spires of Kingston are fading in the distance as the bright stream enters that glorious labyrinth of mingled wildness and beauty, "The Thousand Isles." Every variety of rare and picturesque scenery which the most profuse outpourings of nature's fairest combinations of forest, rock, and water can effect, is there displayed in the versatile beauties and shifting glories of the kaleidoscope. The water is smooth and unbroken, the heavens soft and clear, and the light fingers of the early autumn are strewing their bright colors on the forest trees. You glide along through a constantly shifting succession of exquisite landscapes. Innumerable isles, of every variety of shape, size, and character, seem thrown at random over the waves, some apparently of miles in length, others almost too small for the solitary tree that springs from their tiny centre—some showing a bold outline of jagged rock, others resting like fairy baskets of foliage on the breast of the sweet waters. —*The Maple Leaf.*

THE COTEAU RAPID.

The Coteau—broad, and long, and boisterous!
The waves, like white sea monsters, plunge and roll;
Mighty, and grand, and wildly perilous,
It lives a life of torment. Some mad soul
Seems shouting from each billow, and the howl
Of the lash'd waters, as they foam and writhe,
Is as despair's last shriek, when at the goal,
Where all hope ends, it tumbles headlong with
A cry of anguish to the yawning gulf beneath.

Mad shrieks of horror pierce the seething shore;
Triumphal choruses roll back again;
Up from the depths abysmal, evermore,
Rushes some swift embodiment of pain,
Flying from the fierce conflict all in vain;
A wild, despairing, agonising cry,
A laugh of demons torturing the slain:
Thus the sardonic strife goes crashing by;
The nameless Terror rolls its burden up the sky.

From isle to isle we wend our devious way;
From crest to crest, from wave to wave we bound;
Baptized anew with showers of snowy spray,
All danger seems in lofty tumult drown'd;
From isle to isle the turmoil rolls profound.—

The true enchantment this—no legend rare,
No wondrous tale by hoar tradition crown'd,
But grand, terrific, true, beyond compare,
The vast sonorous war of passion shakes the air.

And suddenly from the infernal whirl
The ambling current bears us far away,
Where no pursuing wave is seen to curl,
No rapid shatters into blinding spray;
But far behind, the breakers' wild array
Shout from the watery slope their threatenings dire,
Looming, like Mohawk ghosts at morning gray,
With awful rage and impotent desire,
Striking the wildest chords of Nature's mighty lyre.

—CHARLES SANGSTER.

VANCOUVER ISLAND.

ALTHOUGH formerly two distinct colonies, Vancouver Island and British Columbia have now been formed into one united Province, the whole being called "British Columbia." Vancouver Island is the older. Established in 1849, under the auspices of the Hudson Bay Company, in fulfilment of a condition attached by the Government to the renewal of their charter, the colony had at first but a feeble existence; and, but for the magnetic attraction of the gold-fields on the other side of the Georgia Channel, it would have remained in the same undeveloped state, if it had not died out altogether. Viewed from seaward, the island presents rather an unprepossessing appearance. Dark frowning cliffs girdle its shores; beyond these, with scarcely any interval of level land, rounded hills, densely covered with fir, rise one above the other; and over these, again, appear bare, rugged mountains, with peaks jagged like the edge of a saw. The whole centre of the island, as far as it has been explored, is said to be a mass of rock and mountain. Although there is not much open land, it is exceedingly fertile. Victoria, the capital, is situated on undulating ground overlooking the bay. Four years ago it was a mere trading port of the Hudson Bay Company, and contained about two hundred and fifty people. Its population has now risen to between three and four thousand. Broad streets of substantial wooden houses have been erected. A few brick stores, a handsome stone bank, the spires of four churches, one or two Government buildings, and the high spiked walls of a jail, distin-

guish the place from a mere log town, and indicate its pretensions to be regarded as a capital. Suburbs, shaded with oak trees like an English park, and rich agricultural land, surround the town. Although there is a harbor at Victoria, it is not so good as that at Esquimault, which is beginning to rise into notice. Half a dozen houses, three or four grog-shops, and one or two stores, represent at present the "town" of Esquimault. Vancouver Island is rich in coal, which is of great value in that part of the world, California being deficient in that important mineral. The population of Vancouver Island (which is equal in size to the half of Ireland) is estimated as follows:—5700 whites, (of whom 700 are women,) 500 colored people, and 15,000 Indians.

—J. H. Fyfe.

BRITISH COLUMBIA.

Sailing through the Strait of St. Juan de Fuca, on his right the traveller beholds the snow-capped mountains of Washington territory. To the left lies Vancouver Island, low in comparison with the opposite shore, but still possessing heights on which, even in June, patches of snow glisten. The glassy waters of the Gulf of Georgia present a striking appearance, dotted with many little islands, and enlivened by swiftly-gliding canoes filled with painted Indians, slow-paced sailing ships, and spluttering steamers. On the side of the gulf, opposite to Vancouver Island, loom the dark shores of British Columbia. At first sight the whole country appears to be clothed with forest; but when the traveller moves inland, he learns that, in the lowlands, the pines frequently take the form of belts, enclosing rich valleys and open prairies; lawns, in which oaks and maples (not pines) predominate; marshes, covered with long coarse grass; and lakes, fringed with flowering shrubs, willows, and poplars. "The impressions which this country leaves on the mind," says Mr Macdonald, C.E., "are of grandeur, gloomy vastness, awful solitude, rendered more dismal by the howl of beasts of prey. Streams white with foam, flow amid cliffs and ravines, forming at places magnificent waterfalls, whose lonely thunder swells and dies away in the interminable solitude of unpeopled space. Tremendous precipices, yawning gulfs, and towering rocks, whose naked backs have withstood the storms of six thousand years, are all there to astonish and rivet the attention. Forests of the deepest green present to the eye vast masses of foliage, fresh and glittering in the sunlight; whilst,

far above, overhanging cliffs and mountains, gleam piles and pyramids of snow and ice, and glacier gorges of remarkable splendor. The surface of the country is generally rocky, except where covered with forest trees and underwood." The deer, the elk, the bear, the puma, and the wolf people the fastnesses of the forest, and there are vast well-stocked covers of grouse, partridge, and various kinds of wild-fowl. Fish swarm along the shores, and in the numerous lakes which stud the country. The salmon is especially abundant. The Indian, by a few hauls of the net, fills his canoe with them. The bear sits by the side of the river and paws them out for breakfast, dinner, and supper. The Hudson Bay Company salts annually about two thousand barrels of salmon. There is a great diversity of climate both in British Columbia and Vancouver Island. The white fox and the humming-bird, the reindeer, lichen, and the cactus may be found within the limits of one territory. Generally speaking, the climate of the sea-coast is milder and finer than that of England, but wet in winter. In the interior the winters are colder, while the summers are hotter.

New Westminster, the capital of British Columbia, stands on the bank of the Fraser River, about fifteen miles from its mouth. It has only three hundred inhabitants, but it boasts a church, school, customhouse, jail, barracks, treasury, mint and assay office. One or two Indian villages in the gold regions are beginning to be transformed into white settlements. With an area about three and a half times as large as Great Britain, British Columbia has a population of 15,000 whites, (of which only a fraction are women,) 2000 Chinamen, and from 10,000 to 15,000 Indians. The aborigines have generally shown themselves friendly; but the outrages which some of the ruffians, attracted by the gold diggings, have perpetrated, have naturally provoked reprisals.

At present, British Columbia is living on its gold-fields. The chief fields are situated in the newly-discovered district of Cariboo, (a corruption from Cerf-bœuf, a large species of reindeer which inhabits the country,) near the sources of Fraser River. This district is described as a

> "Land of brown heath and shaggy wood,
> Land of the mountain and the flood;"

for it is a rugged mass of hills and streams—in the lower parts swampy and heavily timbered with extensive forests, and covered with a dense brushwood in the higher latitudes. The only level

ground is found on the tops of the mountains, which are all flat. Ravines abound, along the sides of which run what the miners call "benches," or terraces. These benches, as far as they have been tested, have yielded gold. The only portion of the district that has been explored is a patch of country fifty miles from north to south, and thirty miles from east to west. It bears a striking resemblance to the richest regions of California, and exhibits all the characteristics of an auriferous country. As far as "prospecting" has yet gone, this character has been fully established. The gold is found a few inches, a foot or two, and very seldom more than six feet, below the surface. The gold is all coarse gold—granulated, gravelly stuff, mixed with pellets and pebbles of pure metal of considerable size.

The prizes which some of the miners have made appear marvellous. For instance, in two months five men obtained 100,000 dollars' worth of gold. Allowance must be made, however, for the necessarily high prices of provisions. A meal of beans and bacon, with a cup of wretched coffee, cost two dollars; and half a dollar per square inch was charged for water for sluicing. At the diggings, the cost of living was about sixty dollars a day. Mr Macdonald, therefore, calculates that, regarded as a whole, the mining was a losing game, since the expenditure for food, apparatus, &c., in 1861, exceeded the return of gold by 42,614,836 dollars. If fortunes were gained, fortunes must also have been lost at Cariboo.

Another gold region has lately been discovered to the north of the northern limits of British Columbia, in the Indian land, known as the Stickeen country. This district is of vast extent, and belongs to Great Britain, with the exception of a strip or belt on the Pacific, which was ceded to Russia in 1825. Several hundred miners are now at work along the banks of the Stickeen River.

The chief value of British Columbia lies in the fact that it may one day be traversed by a great highway leading from the Atlantic to the Pacific Ocean. —J. H. Fyfe.

THE RED RIVER SETTLEMENT.

In the very centre of the great continent of North America, far removed from the abodes of civilized men, and about twenty miles to the south of Lake Winnipeg, exists a colony, composed of

Indians, Scotchmen, and French Canadians, which is known by the name of Red River Settlement.

Red River differs from most colonies in more respects than one —the chief differences being that, whereas other colonies cluster on the sea-coast, this one lies many hundreds of miles in the interior of the country, and is surrounded by a wilderness; and while other colonies, acting on the golden rule, export their produce in return for goods imported, this of Red River imports a large quantity, and exports nothing, or next to nothing. Not but that it might export if it only had an outlet or a market; but, being eight hundred miles removed from the sea, and five hundred miles from the nearest market, with a series of rivers, lakes, rapids, and cataracts separating from the one, and a wide sweep of treeless prairie dividing from the other, the settlers have long since come to the conclusion that they were born to consume their own produce, and so regulate the extent of their farming operations by the strength of their appetites. Of course, there are many of the necessaries, or, at least, the luxuries of life, which the colonists cannot grow—such as tea, coffee, sugar, coats, trousers, and shirts—and which, consequently, they procure from England by means of the Hudson Bay Fur Company's ships, which sail once a year from Gravesend laden with supplies for the trade carried on with the Indians. The bales containing these articles are conveyed in boats up the rivers, carried past the waterfalls and rapids overland on the shoulders of stalwart *voyageurs*, and finally landed at Red River, after a rough trip of many weeks' duration.*

The colony was founded in 1811 by the Earl of Selkirk, previously to which it had been a trading port of the Fur Company. At the time of which we write, it contained about five thousand souls,† and extended upwards of fifty miles along the Red and Assiniboine rivers, which streams supplied the settlers with a variety of excellent fish. The banks were clothed with fine trees; and immediately behind the settlement lay the great prairies, which extend in undulating waves, almost entirely devoid of shrub or tree, to the base of the Rocky Mountains.

* Since the above was written, a considerable trade has been carried on between the settlement and the State of Minnesota, through which the Red River mail route runs, and through which all exports from Canada to the settlement must pass. A steamboat now plies on the Red River between the town of Pembina, in the United States, and the settlement.

† Since increased to seven thousand.

Although far removed from the civilized world, and containing within its precincts much that is savage, and very little that is refined, Red River is quite a populous paradise, as compared with the desolate, solitary establishments of the Hudson Bay Fur Company. These lonely dwellings of the trader are scattered far and wide over the whole continent—north, south, east, and west. Their population generally amounts to eight or ten men, seldom to thirty. They are planted in the thick of an uninhabited desert, their next neighbors being from two to five hundred miles off, their occasional visitors bands of wandering Indians, and the sole object of their existence being to trade in the furry hides of foxes, martens, beavers, badgers, bears, buffaloes, and wolves. It will not, then, be deemed a matter of wonder that the gentlemen who have charge of these establishments, and who, perchance, may have spent ten or twenty years in them, should look upon the colony of Red River as a species of Elysium, a sort of haven of rest, in which they may lay their weary heads, and spend the remainder of their days in peaceful felicity, free from the cares of a residence among wild beasts and wild men. Many of the retiring traders prefer casting their lot in Canada; but not a few of them smoke out the remainder of their existence in this colony, especially those who, having left home as boys fifty or sixty years before, cannot reasonably expect to find the friends of their childhood where they left them, and cannot hope to remodel tastes and habits long nurtured in the backwoods, so as to relish the manners and customs of civilized society.

—BALLANTYNE'S *Fur Traders.*

HUDSON BAY TERRITORY.

THERE is in this western world yet another region of vast size, belonging to the British Crown: it extends from the Labrador coast to the Pacific, four thousand miles from east to west, and from Canada to the North Pole. In its untrodden solitudes, and among the eternal snows of its mountains, lie the mysterious sources of those vast rivers which intersect the plains of the Northern Continent. This dreary tract is called the HUDSON BAY TERRITORY. A ridge of mountains runs some degrees to the north of, and parallel to the St. Lawrence, as far as the sources of the Ottawa; there it bends away to the north-west, till above Lake Superior, it again inclines to the south, sending out a branch to

the unknown regions of the north-west. About three thousand miles from the eastern shores of the continent, these branches meet the great line of the Rocky Mountains, running from north to south. Numbers of large rivers flow from these ranges, some to the Gulf of Mexico, others into the Pacific, some into the great lakes of the St. Lawrence, others into Hudson Bay and the frozen oceans of the north. These mountains are nearly five hundred miles in breadth; to the east lies a marshy country where coal abounds; next to this are immense plains and prairies, and still farther east, a desert of rocks and sand, lakes and rivers, stretches away to an unknown distance. On the north, this dreary trackless waste extends to the frozen seas. On the south-west of the "Barren Land" are the Great Bear and Slave Lakes, nearly as large as Lake Huron and Lake Michigan. The southern shores are rich and level, the waters dotted with islands, which are covered with dark woods, and well-stocked with Indian deer. The Lake Athabasca, lying north-west of these, is of great length but very narrow; the hardy adventurers who have reached its distant shores, describe them to be of great beauty; two other extensive sheets of fresh water communicate with it. In this neighborhood, and between it and the great lakes of the St. Lawrence, are many fertile plains, fit for the habitations of millions of civilized men.

Again, Lake Winnipeg fills up a portion of the remaining space towards the source of the St. Lawrence; its length is two hundred and forty miles; the breadth varies from ten to fifty. A portion of its waters flows into Lake Superior, through the Lake of the Woods; the greater part, however, falls to the north-west by large rivers, but little known, leading to Hudson Bay. In all these vast lakes the northern shores are rocky, abrupt, and barren, the southern rich and level, as though the alluvial deposits of some great flood, flowing from the north-west to the south-east for many ages, had poured their riches upon them.

The rivers which flow through this region are but little explored, and but imperfect knowledge is yet obtained of their size and capabilities; several of those falling into Hudson Bay, however, have been traced for more than two thousand miles, but their extreme sources man has not yet reached.

The districts to the north of Oregon are called New Georgia, facing Vancouver Island, or Nootka, the more familiar name. Here some mountains rise to a great height, white with eternal

snows; but the plains and valleys are fertile, and dotted with rich woods. Clear brooks wander among these undulations, and an exuberant vegetation shows the wealth of the soil and the mildness of the climate; all the trees of Europe flourish here, and grow to an enormous size. Winter spares the western coasts of the American Continent; the soft breezes of the Pacific temper its severity.

For three hundred more miles of seaboard to the north, the country is called New Hanover; its general characteristics are like those of the district last described, but rather more severe. New Cornwall extends thence to the Russian possessions; the climate and the productions show the approach to the Pole, but near the sea the forests are still luxuriant. Many hot springs are here observed among the rocky hills. The numerous islands along the coast are covered with lofty pines, and have a comparatively mild climate up to the straits which separate the Old World from the New. Many mountainous islands, of rare and beautiful rock, form almost a connecting chain between the two promontories of Kamtschatka and Alasca; some of these spout up volcanic fires, others are bound in perpetual ice.

From Behring Strait along to the north-east, are numerous other large and dreary islands, some nearly of the same extent as Ireland; but the snow, and rank, poor grasses are their only covering: beyond them is the bound of human enterprise.

The northern shore of Hudson Bay is the land of desolation; lofty mountains of shattered rock, covered with ice, which the sun has never conquered; valleys where the deep drifts of snow have hidden their slopes since the flood. In a few favored spots, during the brief and fiery summer, some stunted pines and coarse moss show that nature is not dead, but sleeping. Lakes, swamps, and eternal solitudes cover the interior. On the south-western shore are many symptoms of recent volcanic action: there are great seams of coal, iron, and copper. On the south shore, potatoes and other vegetables have been produced, and corn would probably succeed, but has not yet been tried. Farther in the interior, the productions are those of a milder climate than that of Lower Canada. On the coasts of the bay the winter is awful in its severity, and for six months all nature is imprisoned in ice and snow: at some of the settlements of the fur-traders the thermometer in January is often down to fifty degrees below zero, the rivers and lakes are frozen to the bottom, and even in the rooms inhabited by the traders, spirits

have been known to freeze into a solid mass. When the withering north wind blows, it is almost beyond the power of man to bear. The particles of ice borne on its frozen breath are driven like poisoned arrows into the flesh, and cover it with sores. Notwithstanding their warm fur clothing and careful habits, the Europeans are often frost-bitten in these awful winters: the wretched natives frequently perish. Rocks are rent by the grasp of the frost, and, with a crash like the roar of artillery, burst into fragments, and are scattered to great distances round. Often, for many days, the sun is hidden by dense masses of vapor, rising from the sea, and condensed by the cold on the coasts. In the severest times, false suns and moons throw their chill and ghastly glare over the white waste; and, from the inaccessible regions of the Pole, livid flashes illumine the dark skies with a sinister and mysterious light.

For the three months of summer, a more than tropical heat opens this dreary wilderness to the fearless sailors of England; but squalls and currents of terrible violence are to be braved in reaching it. Borne by the tides and winds, huge icebergs glide among these perilous seas, sometimes crushing the largest ships like nut-shells: in one month of one year—April 1825—twenty-five vessels were lost in Melville Bay.

Three distinct native races are condemned to inhabit this dismal country. All are on very friendly terms with the servants of the Hudson Bay Company. They are expert in the chase, and gifted with wonderful endurance: their manners are mild and kind, and they are faithful when any trust is reposed in them; but when the accursed fire-water is within their reach, no tiger is more fierce and bloodthirsty. Very little can be said in favor of their moral character, and they, too, are rapidly diminishing in number. The race sinks lower in the scale of humanity as they spread towards the north and east; there they hunt with the bow and arrow, and fish with nets made of thongs from the skins of beasts; many eat their food raw, others seethe it in birch bark vessels, filled with water heated by hot stones. They are filthy and disgusting in their habits; their horses and other domesticated brutes eat animal food, grass and herbage, even in the summer, being very scanty.

These Indians leave their dead to the carrion birds, and to the wild beasts of the hills. When old age comes on, and they are helpless, their fate is to lie down and perish; neither child nor friend will minister to their wants. In nearly all qualities of

mind and body they are a mean and wretched people. The Esquimaux dwell farther to the north, and from time immemorial have warred against these Indians, who are stronger, and treat them with great barbarity : these are a feeble and timorous race, inhabiting chiefly the islands and peninsulas, where they think themselves more safe from their dangerous neighbors. Of late years the English have made peace between them ; but the Esquimaux do not yet dare to venture near the trading factories. In the summer a sloop visits their coast and receives their furs, in exchange for European goods. They are of a low and unsightly figure ; their weapons clumsy and inefficient, but much ingenuity is displayed in some of their attempts at ornament. In winter they wander from lake to river, cutting holes in the ice, catching fish and eating it raw : their huts are low and wretched, covered with the skins of deer. Various tribes of these Esquimaux are scattered through this vast northern region, and along the shores of the Polar Sea. The moose, the reindeer, the buffalo, the bear, and many other animals, are here to be found, with nearly every bird which we have in England. Whales and seals frequent the neighboring waters in great numbers, with salmon, capelins, and many other dainty fish : in winter they seek some milder climate, and leave the wretched inhabitants to the risk of starvation. Stores are laid in against these times of famine, and some of the coarse herbage assists in the support of life.

The first European that reached these seas was Henry Hudson, sent out in 1610, by the Russia Company, to seek the north-west passage. His crew mutinied, and left him, his son, and some others, to perish on the desolate shores. The same company sent out several other trading expeditions to these countries, and finally, in 1669, received a royal charter, giving them the exclusive privilege of commerce and settlements in the whole of the coasts and districts within Hudson Strait. They retain these rights up to the present day, employing a great quantity of shipping, and a number of adventurous men, who hunt among these vast plains and forests, and barter English goods with the tribes of the interior for their portion of the spoils of the chase.

The few settlements or factories round Hudson Bay are at the mouths of rivers, and well fortified : they are Forts Churchill, York, Albany, and Moose ; there are other smaller settlements in the interior, on the great rivers. After the French were driven from Canada, a rival company was established, to trade with the Indians from Montreal, called the North-West Company. They

entered these regions by the great Canadian Lakes, built numerous forts near those of their older rivals, invading their chartered rights. For a great part of a century they were almost at open war; several collisions took place between their people, and in one of these twenty-three lives were lost. Lately the interests of these great rivals have been joined, to the great advantage of both; and they are now so powerful a body as to defy all chance of successful competition. To their establishments in the Oregon Territory is due the superior strength of the English power in those districts. Nearly all the Indian tribes are friendly and obedient to them, and as ready to defend them in war as to serve them in peace.

The British possessions, lying to the north and west of Canada, contain three millions seven hundred thousand square miles of land—a greater extent than the whole of the United States. Vast though it be, only a small part of this dominion can be inhabited by civilized man: from the remainder, the Desert and the Polar snows shut him out for ever. To the west, along the favored shores of the Pacific, millions upon millions of the human race could find abundant sustenance.

—WARBURTON'S *Hochelaga*.

THE INDIAN.

Now had the autumn day gone by, and evening's yellow shade
Had wrapt the mountains and the hills, and lengthen'd o'er the glade.
The honey-bee had sought her hive, the bird her shelter'd nest,
And in the hollow valley's gloom both wind and wave had rest.

And to a cotter's hut that eve there came an Indian chief;
And in his frame was weariness, and in his face was grief.
The feather o'er his head that danced was weather-soil'd and rent,
And broken were his bow and spear, and all his arrows spent.

And meek and humble was his speech; he knew the white man's hand
Was turn'd against those wasted tribes, long scourged from the land.
He pray'd but for a simple draught of water from the well,
And a poor morsel of the food that from his table fell.

He said that his old frame had toil'd a wide and weary way,
O'er the sunny lakes and savage hills and through the woods that day.
Yet when he saw they scoff'd his words, he turn'd away in woe,
And cursed them not, but only mourn'd that they should shame him so.

When many years had flown away, that herdsman of the hill
Went out into the wilderness the wolf and bear to kill—

To scatter the red deer. and slay the panther in his lair,
And chase the rapid moose that ranged the sunless forests there.

And soon his hounds lay dead with toil ; the deer were fierce and fleet,
And the prairie tigers kept aloof when they heard his hostile feet.
No bread was in that desert place, nor crystal rivulet
To slake the torment of his thirst, or his hot brow to wet.

He fear'd—he fear'd to die—yet knew that nought on earth could save;
For none might catch his parting breath and lay him in his grave.
But lo ! while life's dim taper still burn'd feebly in his breast,
A ministering angel came—his hated Indian guest !

He shared his wheaten loaf with him—his cup of water shared,
And bore the sick man unto those for whom his heart most cared.
"I cursed thee not," the Indian said, "when thou wast stern to me,
And I have had my vengeance now ; white man ! farewell to thee !"

—M'Lellan.

THE QUEEN.

Flush'd with a thousand victories,
O'er half the earth her red cross flies;
The day's free sunlight never dies
On Britain's world-wide throne !
Realms that the Persian never knew,
Waves where Rome's eagle never flew,
Her free dominion own,
From Himalaya's snowy piles,
From green Australia's farthest isles,
Where sweeps the wave round Aden's peak—
Where deep woods shield the vanquish'd Sikh—
Where the wild Cape's gigantic form
Looms through the haze of southern storm;
Where the old Spanish rock looks down
O'er the blue strait with martial frown ;
Where o'er the western world looks forth
Quebec, gray fortress of the north ;
Where old St. Lawrence sings and smiles,
Round blue Ontario's thousand isles ;
Where the young queen of inland seas,
Toronto, woos the forest breeze ;
Where the everlasting spray-cloud floats
High o'er Niagara's thunder notes ;
Where Erie spreads his waters fair,
Where white sails gleam on soft St. Clair ;

Where the Great Spirit's islands* rest
Far off on Huron's sunlit breast;
Where tempests wake Superior's sleep—
Where Oregon looks o'er the deep—
Floats the red cross on high!
And the glad shout of free-born hosts
Echoes from earth's remotest coasts,
"Britain and victory!"

Not the rich flush of martial light
That gilds thine isle's historic might,
Not the wild breath of battle-horn
From centuries of conquest borne,
Not thy bright roll of champions brave,
Earth-tramplers—lords of field and wave!
Thine is a nobler fame!
Where foot can press, where wave can roll,
The slave—the captive's withering soul,
Blesses thy honor'd name.
Beautiful on the mountains shine
Their feet who bear the holy sign,
Salvation's banner-cross unfurl'd,
The rainbow of a darken'd world,
Bright harbinger of Mercy—Peace—
Improvement's triumph—Earth's increase—
Glad hearts and firesides free.
Such *your* bright trophies—Christian isles,
Fruits of long years of wars and toils,
High o'er red Glory's crimson piles,
"God's Word and Liberty."

And Thou! upon whose awful breath,
Hang time and empire—judgment—death—
Before whose throne earth's slaves and kings
Alike shall stand, weak suppliant things;
Father of Him, whose gentle eye
Look'd kind on childhood's purity,
Shield Thou our Queen with strength divine,
Pour blessings on her princely line,
Theirs be Worth—Victory—Might!
Not with red sword and fiery brand,
For shatter'd hearth and wasted land.
Be theirs a nobler fight—
To sway the heart of Christian man,
Lift the red cross in Freedom's van,
Bid Thy pure altars point to heaven,
The chain from slavery's neck be riven,

* The Manitoulin Islands.

Let their bright standards fly
On farthest shore and wildest main,
Glad heralds of the angelic strain,
'PEACE UPON EARTH—GOODWILL TO MEN,
GLORY TO THEE ON HIGH!"

—*The Maple Leaf.*

THE MATHEMATICAL SCIENCES.

THE word Mathematics comes to us from the Greek, and may be fairly translated as *the Science*—so called, because the ancients, who were devoted to the study of it, looked upon Mathematics as the only true science, and the basis or groundwork of all others. Everything belonging to form and position, quantity and number, is embraced by this science. Mathematics are of two kinds: pure, and mixed or applied. When they are called pure, it is in the same sense as we speak of water being pure; that is, without any mixture of other ingredients. Now we not only speak of 2 books, 3 lessons, 4 scholars, but of the numbers 2, 3, and 4, without referring to anything apart from the numbers themselves. In Algebra, you know that the letters *a*, *b*, *c*, &c., stand for anything at all; and in Geometry we speak of an angle, a straight line, or a circle, without alluding to any particular angle, line, or circle. Such are Pure Mathematics. But Mathematics are applied to numberless uses; to keep accounts, and to measure fields, to direct the sailor in his course, and to teach the soldier how to fire a rifle or point a cannon. These, however, are not sciences, they are arts; for an art is a science put into practice. There are applications of the science of Mathematics, which are sciences themselves—namely, the application of it to the many objects which nature exhibits to our gaze, and, more especially, to the description of force, that force which lives and moves in everything in the world. Thus mixed up with solids and liquids and gases, weighing the earth, sounding the sea, numbering the stars, and measuring the speed of light and sound, they are no more Pure, but become Applied Mathematics, and give birth to several systems of knowledge which may be called the Mathematical Sciences. In the following short sketch of these you will meet with little or nothing of a mathematical nature; not till you begin to study these sciences in earnest will you have to do with that system which, in many respects, deserves the title of *the Science*.

The six sciences to which Mathematics are applied are generally ranked under the one great head of Physics, from a Greek word signifying *things pertaining to nature*, or, as it is oftener called, Natural Philosophy. Natural Philosophy has to deal with the whole of Nature's wide domain, viewing it, not as a passive field for contemplation, but as a scene of restless activity, and attempting to explain the causes to which that activity is due. Endeavor, now, to grasp with your mind this wide domain; strive to include in your thoughts the earth we live upon; the sky above us, with the sun, moon, and stars shining in it; land and water; plants and animals; and the atmosphere with all that it contains. These are all composed of matter that may be seen and felt, whether it be solid matter, as stone and wood; liquid, as oil and water; or gaseous, as air and coal gas. If we regard matter as one thing, we find that the Natural World, which is to be carefully distinguished from the Spiritual World, contains but two great elements—matter and force. I have already said that we cannot see force; we can, however, see its effects. When force is applied to a body at rest, the body begins to move; and when a similar force is applied to it in an opposite direction it stops; we thus see the effects of force not only in *motion* but also in *rest*. Force is frequently called by the name of one of its effects, and in many books we see the first laws of Physics treated of under the title of Matter and Motion.

Let us enter now upon the consideration of the Mathematical Sciences, and, in order to do so aright, let us first reflect upon the two great subjects of thought, matter and motion. We look up into the heavens, and see the planets moving through space in their paths around the sun; we know also that our own earth revolves along with them, while the moon, wheeling round the earth, accompanies it on its course. We ask ourselves the question—What is the reason that the heavenly bodies thus move in regular order through the sky, without anything visible to support or keep them in their places? Upon this globe, the round ball which we inhabit, there are continents, seas, and islands, that constantly revolve with it in all directions, now up and now down, so that we speak of those who live upon the other side of the world as being at our antipodes, or opposite our feet. Why do not these people fall off? What hinders the earth from flying to pieces with so much whirling about? How is it that the water of oceans, lakes, and rivers, does not flow out of the world, when the parts of the earth in which these are situated are turned

upside down? There are many other questions suggested by our daily experience. When we throw a stone up in the air, why does it return to the ground and not remain aloft, like the stars? How is it that a ball will not continue to roll along the ground in the same way as the stars perpetually circle round in the sky? These questions are all very important, notwithstanding that they appear so simple, and have engaged the attention of some of the greatest men that ever lived. The science which answers these and similar questions, which describes the properties or qualities of matter, and explains the laws that govern the *force* which acts upon it, is called Mechanics. Mechanics is a Greek word, and its primary, or first, signification was, *that which pertains to machines or contrivances*, because it first denoted the explanation of that power or force which man exerts upon natural objects by means of his arms, hands, and other natural or artificial machines. Now, however, it embraces all the contrivances of nature as well, and, as we have seen, is applied to the science which investigates forces and powers, and their action upon bodies, or the laws which govern matter and force. There are three kinds of matter; solid matter, such as earth, stone, wood, and flesh; fluid, as water, quicksilver, sap, and blood; and gaseous or elastic, because it contracts and expands, such as air, gas, vapor, &c. Each of these kinds of matter has a separate division of mechanics allotted to it. Thus we have three sciences instead of one; namely, mechanics of solids, mechanics of fluids, and mechanics of elastic bodies. Let us first examine the mechanics of solids. We have already learned that wherever there is matter, force is also present and acting upon it. Now, we observe that by far the greater portions of this earth, such as its mountains and rocks, the buildings which men have erected upon it, and many similar things, do not move at all. The earth certainly moves and they go along with it, but they do not alter their positions on the earth. If we set down a chair, a book, or other inanimate object, in any place, we naturally expect to find it in the same spot, unless moved by some person. But if force is constantly acting upon objects, (and we have seen that force reveals its existence by motion,) why do not these objects move? The reason simply is, that they are beset, as it were, by equal forces on every side, and are thus prevented from shifting their position. That division of the science of the mechanics of solids, which treats of solid bodies in a state of rest, and of the forces that keep them so, is called Statics, a Greek word which means

bringing to a standstill. But solid bodies do not always stand still. The world revolves through space, snow and hail fall from the clouds, a hand-sleigh slides down a hill, and if we strike a ball it will fly forward with greater or less velocity, according to the force with which it is struck. There must, therefore, be a division of the science treating of the motions of solid bodies, and of the influence of moving bodies upon one another. This division is called Dynamics, also from the Greek, and signifying *that which pertains to power or force.*

When we turn our attention to fluids, we find that water or any other liquid, whether in seas, lakes, and rivers, or in an open vessel, such as a basin, tub, or pail, is always level on the surface, whatever inequalities may exist in the bottom or sides of that which contains it. If we take away the sides of the vessel which uphold the liquid, it will immediately give way and flow evenly over the surface of the ground, or, as it is scientifically expressed, will seek its own level. This case is very different from that of solid bodies, which are of all shapes, square and round, rough and smooth, and can stand alone, even if they are as high as the pyramids of Egypt. There must be some good reason for this, and every one who wishes to know what that reason is, will study the science of Hydrostatics, which is another Greek word, equivalent to *bringing fluids to a standstill.* But this is not all we have to learn concerning fluids. We have seen already that water moves to find its own level, whether, in order to do so, it has to spread equally over the ground, or to rise through a pipe to the distance of many feet. It can also be made to move upwards, far beyond its own level, in pumps and similar machines. Naturally, however, it moves downwards, and seeks the lowest ground. What causes these varieties of motion? To answer this question satisfactorily, you must consult some work upon the science of Hydrodynamics, or *water-power.*

There still remains another department of Mechanics; namely, that which deals with gaseous or elastic bodies. This department has a name of its own, Pneumatics, which in the Greek signifies *things pertaining to air or wind.* Like the mechanics of solids and fluids, it has two divisions. The first of these treats of the properties of air at rest; such as its pressure, which is about fourteen tons' weight to a man of average size; its weight, which is from eight to nine hundred times less than that of water, and which decreases the higher we ascend in the atmosphere; its elastic nature, so plainly shown by an ordinary pop-gun; and its

power of supporting other substances, as in the case of a column of quicksilver in a barometer. This division is called Aerostatics, being applied, not to air alone, but to all gaseous bodies, and bearing in Greek a meaning similar to that of Hydrostatics, merely altering the word *fluids* to *gases*. The second division deals with the motions of gases, particularly with air and its mechanical effects, such as the action of wind, exhibited in the turning of windmills, the sailing of ships, blowing down trees, dispersing clouds, and other natural and artificial employments. It sometimes encroaches upon the Science of Meteorology, which was described among the natural sciences. This part of Pneumatics is denominated Aerodynamics, or *air-power*.

Thus far we have briefly examined the three departments of Mechanics with their subdivisions, in all of which the prevailing idea is that of *force*, a something that can only be described by the one great science of Mathematics. There remain no other natural objects than those included under these three departments, to which force can be applied. Whence, then, do we get our other sciences? One we find dealing with those bodies which lie beyond our atmosphere, outside of the earth; another treats of that light which all of them, but one in particular, send down to our eyes; and the third, of that application of force to our ears which we call sound.

Who has not, many a time, gazed upon the majestic, light-giving sun, the pale moon, and the countless host of stars that spangle the sky, with feelings of wonder and admiration? How often have we asked ourselves what all these bright specks in heaven were, how far it was to them, how large they were, how they moved, and what kept them from falling out of their places! These and a thousand other questions are answered already, while the discoveries that are constantly being made by means of the telescope are satisfying even more curious inquirers than ourselves. The science which possesses so vast a domain, extending millions and millions of miles beyond this little earth, and including immense worlds and systems of worlds with which our small planet would hardly bear comparison, is that already well known to you as Astronomy. The Greek word Astronomy signifies *the law of the stars*, a law, or rather a series of laws, which could never have been discovered but for the existence of the science of Mathematics.

The sun is the great source of light to the system of which our earth forms a part. How great must that force be which sends

down the cheering sunbeam through ninety-five millions of miles, in eight minutes of time, to illumine our earth! You wonder, perhaps, how men could calculate the time that such a very subtle body as light takes to travel. It is not, however, my intention to tell you in this lesson, which is only designed to stimulate your curiosity with regard to the Mathematical Sciences. All such information you will find in books written upon the science of Optics, or, as the Greek term may be translated, of *things pertaining to sight or vision*, for our eyes are the instruments with which we see and study light. This science embraces everything connected both with light in itself and our perception of it. It tells us what light is, how it moves, through what substances it will pass, and from what bodies it is reflected. It also explains the nature of all optical instruments, natural and artificial; the eye, the telescope, the microscope, spectacles, and looking-glasses. Under it also are included the wonderful phenomena or appearances which we know as *colors;* for a single white ray of light is composed of seven smaller rays, *red*, *orange*, *yellow*, *green*, *blue*, *indigo*, and *violet*, such as you have seen separated by a glass prism. This science consists of three divisions: Dioptrics, the science of light passing through any medium, as air, water, and glass; Catoptrics, the science of reflected light, as from a mirror; and Chromatics, or the science of color. All these are Greek names, appropriate to the objects of the Optical Sciences.

We have now arrived at the last of the Mathematical Sciences; that, namely, which investigates the nature and properties of sound. If, by means of a machine called the air-pump, we empty a glass vessel of the air which you know pervades everything, and ring a bell in the empty jar, no sound will be heard. From this it is plain that the presence of air, or some other medium, is necessary in order to constitute sound. The science of Acoustics, a Greek word meaning *things pertaining to the sense of hearing*, teaches that sound is produced in consequence of the waves excited in the atmosphere or other medium (for water will carry sound) by the moving body, such as a bell, a falling tree, or a gunshot, striking upon the ear in rapid succession. To this science belongs the whole theory of music, vocal and instrumental, with many other interesting subjects of a similar nature. Acoustics are of two kinds: Diacoustics, or the science which treats of sound conveyed through a medium, as air, water, &c.; and Catacoustics, dealing with reflected sounds, such as an echo.

These words are derived, like most of those with which we have become acquainted in this lesson, from the language of the ancient Greeks, who first studied the subjects to which they are applied; and, as you will at once perceive, are analogous to those denoting two of the divisions of the science of Optics.

We have now completed our view of the Mathematical Sciences. They are not so easily understood, nor so evident to our senses, as the five Natural Sciences; but the objects with which they have to do are those we meet with every day in our lives, and which, if we be true searchers after knowledge, we will not neglect to look into. Before doing so, however, we must apply ourselves diligently to the study of Pure Mathematics, and, when we have fairly mastered their various branches, we will find their application to matter and force one of the most ennobling of pursuits and agreeable of all recreations.

The Mathematical Sciences.

I. Pure Mathematics.

II. Mixed or Applied Mathematics, Physics, or Natural Philosophy.

- Mechanics of Solids,..... { Statics. Dynamics.
- Do. of Fluids,..... { Hydrostatics. Hydrodynamics.
- Do. of Gases, or Pneumatics,..... { Aerostatics. Aerodynamics.
- Astronomy.
- Optics,..... { Dioptrics. Catoptrics. Chromatics.
- Acoustics,..... { Diacoustics. Catacoustics

—*Campbell's Fifth Reader.*

EXECUTION OF MARY QUEEN OF SCOTS.

(A.D. 1587.)

On Tuesday, the 7th of February 1587, the two earls arrived at Fotheringay, and demanded access to the Queen, read in her presence the warrant for execution, and required her to prepare to die next morning. Mary heard them to the end without emotion, and crossing herself in the name of the Father, and of the Son, and of the Holy Ghost, "That soul," said she, "is not worthy the joys of heaven, which repines because the body must endure the stroke of the executioner; and though I did not

expect that the Queen of England would set the first example of violating the sacred person of a sovereign prince, I willingly submit to that which Providence has decreed to be my lot." And laying her hand on a Bible which happened to be near her, she solemnly protested that she was innocent of that conspiracy which Babington had carried on against Elizabeth's life. She then mentioned the request contained in her letter to Elizabeth, but obtained no satisfactory answer. She entreated with particular earnestness, that now in her last moment, her almoner might be suffered to attend her, and that she might enjoy the consolation of those pious institutions prescribed by her religion. Even this favour, which is usually granted to the vilest criminal, was absolutely denied.

Her attendants, during this conversation, were bathed in tears, and, though overawed by the presence of the two earls, with difficulty suppressed their anguish; but no sooner did Kent and Shrewsbury withdraw, than they ran to their mistress and burst out into the most passionate expressions of tenderness and sorrow. Mary, however, not only retained perfect composure of mind, but endeavored to moderate their excessive grief. And, falling on her knees, with all her domestics round her, she thanked Heaven that her sufferings were now so near an end, and prayed that she might be enabled to endure what still remained with decency and with fortitude. The greater part of the evening she employed in settling her worldly affairs. She wrote her testament with her own hand. Her money, her jewels, and her clothes, she distributed among her servants, according to their rank or merit. She wrote a short letter to the King of France, and another to the Duke of Guise, full of tender but magnanimous sentiments, and recommended her soul to their prayers, and her afflicted servants to their protection. At supper, she ate temperately, as usual, and conversed not only with ease, but with cheerfulness; she drank to every one of her servants, and asked their forgiveness, if ever she had failed in any part of her duty towards them. At her wonted time she went to bed and slept calmly for a few hours. Early in the morning she retired into her closet, and employed a considerable time in devotion. At eight o'clock, the high sheriff and his officers entered her chamber, and found her still kneeling at the altar. She immediately started up, and with a majestic mien, and a countenance undismayed, and even cheerful, advanced towards the place of execution, leaning on two of Paulet's attendants.

She was dressed in a mourning habit, but with an elegance and splendor which she had long laid aside, except on a few festival days. An *Agnus Dei* hung by a pomander chain at her neck, her beads at her girdle, and in her hand she carried a crucifix of ivory. At the bottom of the stairs the two earls, attended by several gentlemen from the neighboring counties, received her; and there Sir Andrew Melvil, the master of her household, who had been excluded for some weeks from her presence, was permitted to take his last farewell. At the sight of a mistress whom he tenderly loved, in such a situation, he melted into tears: and as he was bewailing her condition, and complaining of his own hard fate in being appointed to carry the account of such a mournful event into Scotland, Mary replied, "Weep not, good Melvil, there is at present greater cause for rejoicing. Thou shalt this day see Mary Stuart delivered from all her cares, and such an end put to her tedious sufferings as she has long expected. Bear witness, that I die constant in my religion; firm in my fidelity towards Scotland; and unchanged in my affection to France. Commend me to my son; tell him I have done nothing injurious to his kingdom, to his honor, or to his right; and God forgive all those who have thirsted, without cause, for my blood."

With much difficulty, and after many entreaties, she prevailed on the two earls to allow Melvil, together with three of her men-servants and two of her maids, to attend her to the scaffold. It was erected in the same hall where she had been tried, raised a little above the floor, and covered, as well as a chair, the cushion, and block, with black cloth. Mary mounted the steps with alacrity, beheld all this apparatus of death with an unaltered countenance, and signing herself with the cross, she sat down in the chair. Beale read the warrant for execution with a loud voice, to which she listened with a careless air, and like one occupied in other thoughts. Then the Dean of Peterborough began a devout discourse, suitable to her present condition, and offered up prayers to Heaven in her behalf; but she declared that she could not in conscience hearken to the one, nor join with the other; and falling on her knees, repeated a Latin prayer. When the dean had finished his devotions, she, with an audible voice, and in the English tongue, recommended unto God the afflicted state of the Church, and prayed for prosperity to her son, and for a long life and peaceable reign to Elizabeth. She declared that she hoped for mercy only through the death of Christ, at the foot of

whose image she now willingly shed her blood, and lifting up and kissing the crucifix, she thus addressed it: "As Thy arms, O Jesus, were extended on the cross; so with the outstretched arms of Thy mercy receive me, and forgive my sins."

She then prepared for the block, by taking off her veil and upper garments; and one of the executioners rudely endeavoring to assist, she gently checked him, and said, with a smile, that she had not been accustomed to undress before so many spectators, nor to be served by such valets. With calm but undaunted fortitude, she laid her neck on the block; and while one executioner held her hands, the other, at the second stroke, cut off her head, which falling out of its attire, discovered her hair already grown quite gray with cares and sorrows. The executioner held it up still streaming with blood, and the dean crying out, "So perish all Queen Elizabeth's enemies!" the Earl of Kent alone answered Amen. The rest of the spectators continued silent, and drowned in tears, being incapable, at that moment, of any other sentiments but those of pity or admiration.

—ROBERTSON.

MARY, QUEEN OF SCOTS.

I LOOK'D far back into other years, and lo! in bright array
I saw, as in a dream, the forms of ages pass'd away.
It was a stately convent, with its old and lofty walls,
And gardens with their broad green walks, where soft the footstep falls
And o'er the antique dial-stones the creeping shadow pass'd,
And all around the noon-day sun a drowsy radiance cast.
No sound of busy life was heard, save from the cloister dim
The tinkling of the silver bell, or the sisters' holy hymn.
And there five noble maidens sat beneath the orchard trees,
In that first budding spring of youth, when all its prospects please;
And little reck'd they, when they sang, or knelt at vesper prayers,
That Scotland knew no prouder names—held none more dear than theirs:—
And little even the loveliest thought, before the holy shrine,
Of royal blood and high descent from the ancient Stuart line:
Calmly her happy days flew on, uncounted in their flight,
And as they flew, they left behind a long-continuing light.
The scene was changed. It was the court, the gay court of Bourbon,
And 'neath a thousand silver lamps a thousand courtiers throng:
And proudly kindles Henry's eye—well pleased, I ween, to see
The land assemble all its wealth of grace and chivalry:—
But fairer far than all the rest who bask on fortune's tide,
Effulgent in the light of youth, is she, the new-made bride!

The homage of a thousand hearts—the fond deep love of one—
The hopes that dance around a life whose charms are but begun,—
They lighten up her chestnut eye, they mantle o'er her cheek,
They sparkle on her open brow, and high-soul'd joy bespeak :
Ah ! who shall blame, if scarce that day, through all its brilliant hours,
She thought of that quiet convent's calm, its sunshine and its flowers ?

The scene was changed. It was a bark that slowly held its way,
And o'er the lee the coast of France in the light of evening lay ;
And on its deck a lady sat, who gazed with tearful eyes
Upon the fast-receding hills, that dim and distant rise.
No marvel that the lady wept,—there was no land on earth
She loved like that dear land, although she owed it not her birth ;
It was her mother's land, the land of childhood and of friends,—
It was the land where she had found for all her griefs amends,—
The land where her dead husband slept—the land where she had known
The tranquil convent's hush'd repose, and the splendors of a throne ;
No marvel that the lady wept,—it was the land of France—
The chosen home of chivalry—the garden of romance !
The past was bright, like those dear hills so far behind her bark ;
The future, like the gathering night, was ominous and dark !
One gaze again—one long, last gaze—" Adieu, fair France, to thee !"
The breeze comes forth—she is alone on the unconscious sea !

The scene was changed. It was an eve of raw and surly mood,
And in a turret-chamber high of ancient Holyrood
Sat Mary, listening to the rain, and sighing with the winds
That seem'd to suit the stormy state of men's uncertain minds.
The touch of care had blanch'd her cheek—her smile was sadder now,
The weight of royalty had press'd too heavy on her brow;
And traitors to her councils came, and rebels to the field;
The Stuart *sceptre* well she sway'd, but the *sword* she could not wield.
She thought of all her blighted hopes—the dreams of youth's brief day,
And summoned Rizzio with his lute, and bade the minstrel play
The songs she loved in early years—the songs of gay Navarre,
The songs perchance that erst were sung by gallant Chatelar;
They half beguiled her of her cares, they soothed her into smiles,
They won her thoughts from bigot zeal and fierce domestic broils:—
But hark! the tramp of armèd men! the Douglas' battle-cry!
They come—they come!—and lo! the scowl of Ruthven's hollow eye!
And swords are drawn, and daggers gleam, and tears and words are vain—
The ruffian steel is in his heart—the faithful Rizzio's slain!
Then Mary Stuart dash'd aside the tears that trickling fell:
"Now for my father's arm!" she said; "my woman's heart farewell!"

The scene was changed. It was a lake, with one small lonely isle,
And there, within the prison walls of its baronial pile,
Stern men stood menacing their queen, till she should stoop to sign
The traitorous scroll that snatch'd the crown from her ancestral line:—
"My lords, my lords!" the captive said, "were I but once more free,
With ten good knights on yonder shore to aid my cause and me,
That parchment would I scatter wide to every breeze that blows,
And once more reign a Stuart-queen o'er my remorseless foes!"
A red spot burn'd upon her cheek—stream'd her rich tresses down,
She wrote the words—she stood erect—a queen without a crown!

The scene was changed. A royal host a royal banner bore,
And the faithful of the land stood round their smiling queen once more:—
She stay'd her steed upon a hill—she saw them marching by—
She heard their shouts—she read success in every flashing eye.
The tumult of the strife begins—it roars—it dies away;
And Mary's troops and banners now, and courtiers—where are they?
Scatter'd and strewn, and flying far, defenceless and undone;—
Alas! to think what she has lost, and all that guilt has won!
Away! away! thy gallant steed must act no laggard's part;
Yet vain his speed—for thou dost bear the arrow in thy heart!

The scene was changed. Beside the block a sullen headsman stood,
And gleam'd the broad axe in his hand, that soon must drip with blood.
With slow and steady step there came a lady through the hall,
And breathless silence chain'd the lips and touch'd the hearts of all.
I knew that queenly form again, though blighted was its bloom,
I saw that grief had deck'd it out—an offering for the tomb!
I knew the eye, though faint its light, that once so brightly shone;
I knew the voice, though feeble now, that thrill'd with every tone;

I knew the ringlets, almost gray, once threads of living gold!
I knew that bounding grace of step—that symmetry of mould!
E'en now I see her far away, in that calm convent aisle,
I hear her chant her vesper hymn, I mark her holy smile;
E'en now I see her bursting forth upon the bridal morn,
A new star in the firmament, to light and glory born!
Alas! the change!—she placed her foot upon a triple throne,
And on the scaffold now she stands—beside the block—*alone!*
The little dog that licks her hand—the last of all the crowd
Who sunn'd themselves beneath her glance, and round her footsteps bow'd
Her neck is bared—the blow is struck—the soul is pass'd away!
The bright—the beautiful—is now a bleeding piece of clay!
The dog is moaning piteously; and, as it gurgles o'er,
Laps the warm blood that trickling runs unheeded to the floor!
The blood of beauty, wealth, and power—the heart-blood of a queen,—
The noblest of the Stuart race—the fairest earth has seen,—
Lapp'd by a dog! Go, think of it, in silence and alone;
Then weigh against a grain of sand the glories of a throne!

—Bell.

LOCH LEVEN CASTLE.

CHARACTER OF ELIZABETH.

(A.D. 1533–1603.)

There are few great personages in history who have been more exposed to the calumny of enemies, and the adulation of friends, than Queen Elizabeth; and yet there scarcely is any whose reputation has been more certainly determined by the unanimous consent of posterity. The unusual length of her administration, and the strong features of her character, were able to overcome all prejudices; and obliging her detractors to abate much of their invectives and her admirers somewhat of their panegyrics, have, at last, in spite of political factions, and, what is more, of religious animosities, produced a uniform judgment with regard to

her conduct. Her vigor, her constancy, her magnanimity, her penetration, vigilance, address, are allowed to merit the highest praises, and appear not to have been surpassed by any person that ever filled a throne. A conduct less rigorous, less imperious, more sincere, more indulgent to her people, would have been requisite to form a perfect character. By the force of her mind, she controlled all her more active and stronger qualities, and prevented them from running into excess. Her heroism was exempt from temerity, her frugality from avarice, her friendship from partiality, her active temper from turbulency and a vain ambition. She guarded not herself with equal care or equal success from lesser infirmities—the rivalship of beauty, the desire of admiration, the jealousy of love, and the sallies of anger.

Her singular talents for government were founded equally on her temper and on her capacity. Endowed with a great command over herself, she soon obtained an uncontrolled ascendant over her people; and while she merited all their esteem by her real virtues, she also engaged their affection by her pretended ones. Few sovereigns of England succeeded to the throne in more difficult circumstances; and none ever conducted the government with such uniform success and felicity. Though unacquainted with the practice of toleration, the true secret for managing religious factions, she preserved her people, by her superior prudence, from those confusions in which theological controversy had involved all the neighboring nations. And though her enemies were the most powerful princes of Europe—the most active, the most enterprising, the least scrupulous—she was able, by her vigor, to make deep impressions on their state: her own greatness, meanwhile, remained untouched and unimpaired.

The wise ministers and brave warriors who flourished under her reign, share the praise of her success; but instead of lessening the applause due to her, they make great addition to it. They owed, all of them, their advancement to her choice; they were supported by her constancy; and, with all their ability, they were never able to acquire any undue ascendant over her. In her family, in her court, in her kingdom, she remained equally mistress. The force of the tender passions was great over her, but the force of her mind was still superior; and the combat which her victory visibly cost her, serves only to display the firmness of her resolution, and the loftiness of her ambitious sentiments.

The fame of this princess, though it has surmounted the prejudices both of faction and bigotry, yet lies still exposed to another prejudice, which is more durable because more natural, and which, according to the different views in which we survey her, is capable either of exalting beyond measure, or diminishing the lustre of her character. This prejudice is founded on the consideration of her sex. When we contemplate her as a woman, we are apt to be struck with the highest admiration of her great qualities and extensive capacity; but we are also apt to require some more softness of disposition, some greater lenity of temper, some of those amiable weaknesses by which her sex is distinguished. But the true method of estimating her merit is to lay aside all these considerations, and consider her merely as a rational being placed in authority, and intrusted with the government of mankind. We may find it difficult to reconcile our fancy to her as a wife or a mistress; but her qualities as a sovereign, though with some considerable exceptions, are the object of undisputed applause and approbation. —HUME.

THE STEAM-ENGINE.

DR LARDNER has very justly observed, that the steam-engine, as it now exists, is not the exclusive invention of any one individual. It is a combination of inventions, which, for the last two centuries, have been accumulating. The first person of whom we have any record as having a notion of steam as a moving power, was Hero, a mathematician of Alexandria, who flourished about one hundred and thirty years before the Christian era. In a work written by him styled "Eolipile," he describes three several methods of applying steam as a *motive* power: first, to elevate water by its elasticity; secondly, to raise water by its expansive force; and, thirdly, to produce a rotatory motion by its reaction on the atmosphere; the last only was applicable to any useful purpose. The next in order was Solomon de Caus, a Frenchman, who, in 1615, employed the elastic force of steam as a means of raising water. The third attempt to apply steam as a moving power was by Giovanni Bianca, an Italian mathematician, who formed a boiler in the shape of the human head and breast. From the mouth of the figure proceeded a pipe, through which the steam issued, and striking against the vanes of a float-wheel, similar to a common water-wheel or paddle, caused its

revolution; and a pinion being attached, motion, by this means, was given to machinery, which was employed in a drug or pounding mill. The next person whose name is associated with the steam-engine is the Marquis of Worcester; who, for his loyalty to Charles I., was, during the civil wars, imprisoned in the Tower of London. One day, according to the tradition, the lid of the pot in which his dinner was preparing was suddenly elevated. Worcester pondered upon the strange phenomenon which he had witnessed. The idea then suggested itself, that the same force which had raised the cover, might become, under certain circumstances, a useful and convenient motive power. On recovering his liberty, he published, in the year 1663, in a work entitled "The Century of Inventions," a description of the uses and effects of an engine which he had constructed; and he afterwards published a small pamphlet called, "An Exact and True Definition of the most Stupendous Water-Commanding Engine." In neither of these works did he give any statement of the mode of constructing his engine; but, from his description and account of its effects, it may be inferred that its action depended on the condensation, as well as the elastic force of the steam; and, consequently, that in principle it resembled the modern steam-engine. Dr. Papin, a French philosopher, then an exile in England, and a Fellow of the Royal Society of London, was the next improver of the steam-engine, by the introduction of the safety-valve for the boiler. This was in 1690.

Eight years afterwards, Captain Savery, an Englishman, introduced his engine for raising water by steam. This was, in fact, the most useful application of the power; and this discovery, like most of the rest, is said to have been made by accident. The story runs, that the captain, having partaken of too much wine, threw the wine-bottle into the fire. It happened, however, to have a small portion of wine left in it, which was immediately converted into steam by the heat. On perceiving this, he at once thought of trying what effect would be produced by immersing the neck in water, and forthwith tried the experiment; when he found that the steam which filled the flask was condensed, and that the water rushed up into the flask to supply the vacuum caused by this condensation. This casual experiment is said to have given to Savery the idea of constructing an apparatus on this plan, for raising water. It also occurred to him, that he might employ the expansive power of steam, as

used in De Caus's engine. All this he effected; and, by so doing, led the way for the brilliant inventions that were afterwards made in the construction of the steam-engine. This invention was principally devoted to raising water from mines, and bore the name of the "Miners' Friend;" "but," says M. Arago, in his Life of James Watt, "the miners seemed scarcely to appreciate the important compliment he paid them. With one solitary exception, none of them ordered his machines." It appeared that, with all its advantages, this engine did not perform well. In 1705, Thomas Newcomen, a smith and ironmonger, and John Crawley, a plumber and glazier, both of Dartmouth in Devonshire, took out a patent for an improved machine, which they shared with Savery. The next improvement was made by a boy named Humphrey Potter, and arose from accident. M. Arago has thus described the circumstance:—"The first machine of Newcomen required the most unremitting attention on the part of the individual who unceasingly opened and closed certain stopcocks, first for the introduction of the steam into the cylinder, and then for injecting the cold shower for its condensation. It happened on one occasion, that the person so employed was a boy named Potter. His young companions, at their sports, uttered cries of delight, which vexed him beyond endurance. He was all impatience to join in this play; but his required duties did not allow him half a minute's absence; this anxiety excited his ingenuity, and led him to observe relations he had never before thought of. Of the two stopcocks, the one required to be opened at the moment that the beam (which Newcomen first and so usefully introduced into his machines) terminated the descending oscillation, and required to be closed precisely at the termination of the opposite one. The management of the other stopcock was precisely the reverse. The positions, then, of the beam, and of the stopcocks, had a necessary dependence upon each other. Potter seized upon this fact. He perceived that the beam might serve to impart to the other parts of the machine all the required movements; and on the moment he realised his conceptions. He attached a number of cords to the stopcocks, some to the one end of the handle, and some to the other, and these he attached to the most suitable parts of the beam, so that in ascending it pulled one set of cords, and in descending the other; and so effectually, that all the work of his hand was entirely superseded. For the first time, the steam-engine went by itself; and now, no other workman was seen

near it but the fireman, who, from time to time, fed the furnace under the boiler. For the cords of young Potter, the engineers soon substituted rigid vertical rods, which where fixed to the beam, and armed with small pegs, which either pressed from above downwards, or from below upwards, as required, and thus turned the different stopcocks and valves. These rods themselves have since been replaced by other combinations; but, however humbling the avowal, all these expedients are nothing more than simple modifications of a contrivance suggested to a child by his desire to join in the gambols of his youthful companions."

Such was the state in which the steam-engine was found by the great James Watt, at that time a mathematical instrument-maker in Glasgow. There was in the museum of the university of that city a small model of one of Newcomen's steam-engines, which was used to instruct the students at college, but which could scarcely ever be made to work satisfactorily. Professor Anderson, who then filled the chair of natural philosophy in the winter of 1763–4, requested Mr. Watt to repair it, which he soon did; but in doing so, the idea was suggested to him of an improvement in the condensing of the steam, and thus causing a great saving in the expense of the engine. The general practice at that period was to condense the steam in the same cylinder in which the piston works; but this cylinder, being of cast-iron, was at every stroke cooled nearly down to the temperature of the water employed to condense the steam, which caused a great quantity of heat to be wasted in again giving the cylinder the necessary temperature. After many trials, the fortunate thought occurred to Mr. Watt, of saving all the waste of heat and fuel by condensing the steam in a separate vessel, exhausted of air, and kept cool by injection, between which and the cylinder a communication was to be opened every time steam was to be condensed, whilst the cylinder itself was to be kept constantly hot; and having at last perfected this great improvement, (the separate vessel being called the "condenser,") a model was constructed, and the experiments made with it placed the correctness of the theory and the advantages of the invention beyond a doubt. This model has ever since been preserved among the apparatus of the university of Glasgow. His grand invention for saving steam and fuel in steam-engines was completed about the beginning of 1765; and in subsequent years he proceeded with his improvements, and introduced, among other discoveries, the rota-

tory motion of the sun and planet-wheels, the expansive principle, the double engine, the parallel motion, and the smokeless furnace. The application of the centrifugal regulating force of the "governor," was another of his great practical improvements; and the perfection given to the rotative-engine soon led to its general application for imparting motion to almost every species of mill-work and machinery. Thus, then, was the steam-engine completed, under the inventions, discoveries, and improvements of the great master-mind of James Watt. —ANDERSON.

THE SONG OF STEAM.

HARNESS me down with your iron bands, be sure of your curb and rein,
For I scorn the power of your puny hands, as the tempest scorns a chain;
How I laugh'd as I lay conceal'd from sight, for many a countless hour,
At the childish boast of human might, and the pride of human power!

When I saw an army upon the land, a navy upon the seas,
Creeping along, a snail-like band, or waiting the wayward breeze;
When I mark'd the peasant faintly reel with the toil which he daily bore,
As he feebly turn'd at the tardy wheel, or tugg'd at the weary oar;

When I measured the panting courser's speed, the flight of the carrier dove,
As they bore the law a king decreed, or the lines of impatient love;
I could not but think how the world would feel, as these were outstripp'd afar,
When I should be bound to the rushing keel, or chain'd to the flying car.

Ha! ha! ha! they found me at last; they invited me forth at length,
And I rush'd to my throne with thunder blast, and I laugh'd in my iron strength.
Oh, then ye saw a wondrous change on the earth and ocean wide,
Where now my fiery armies range, nor wait for wind or tide.

Hurrah! hurrah! the waters o'er the mountains' steep decline;
Time—space—have yielded to my power—the world! the world is mine!
The rivers the sun hath earliest blest, or those where his beams decline,
The giant streams of the queenly west, or the orient floods divine.

The ocean pales where'er I sweep, to hear my strength rejoice;
And the monsters of the briny deep cower, trembling at my voice.
I carry the wealth and the lord of earth, the thoughts of the godlike mind;
The wind lags after my flying forth, the lightning is left behind.

In the darksome depths of the fathomless mine, my tireless arm doth play,
Where the rocks never saw the sun decline, or the dawn of the glorious day.
I bring earth's glittering jewels up from the hidden caves below,
And I make the fountain's granite cup with a crystal gush o'erflow.

I blow the bellows, I forge the steel, in all the shops of trade;
I hammer the ore, and turn the wheel, when my arms of strength are made;
I manage the furnace, the mill, the mint; I carry, I spin, I weave;
And all my doings I put into print on every Saturday eve.

I've no muscle to weary, no breast to decay, no bones to be "laid on the shelf,"
And soon I intend you may go and play, while I manage the world by myself.
But harness me down with your iron bands, be sure of your curb and rein,
For I scorn the strength of your puny hands, as the tempest scorns a chain.

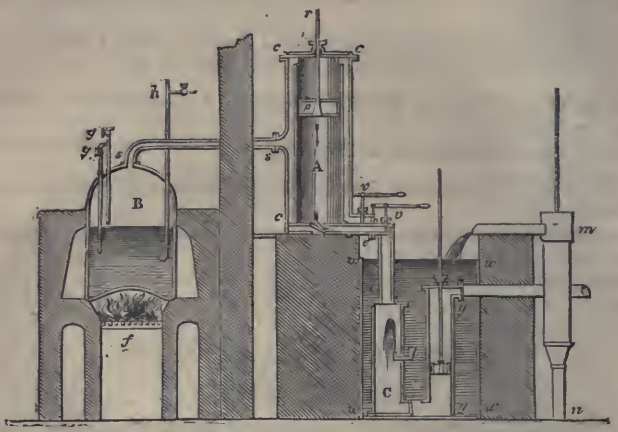
—Anon.

CHARACTER OF JAMES WATT.

(A.D. 1736–1819.)

Mr. James Watt, the great improver of the steam-engine, died on the 25th of August 1819, at his seat of Heathfield, near Birmingham, in the eighty-fourth year of his age.

This name, fortunately, needs no commemoration of ours, for he that bore it survived to see it crowned with undisputed and unenvied honors; and many generations will probably pass away before it shall have gathered "all its fame." We have said that Mr. Watt was the great *improver* of the steam-engine, but, in truth, as to all that is admirable in its structure, or vast in its utility, he should rather be described as its *inventor*. It was by his inventions that its action was so regulated as to make it capable of being applied to the finest and most delicate manufactures, and its powers so increased as to set weight and solidity at defiance. By his admirable contrivance, it has become a thing stupendous alike for its force and its flexibility—for the prodigious power which it can exert, and the ease and precision and ductility with which that power can be varied, distributed, and applied. The trunk of an elephant, that can pick up a pin or rend an oak, is as nothing to it. It can engrave a seal, and crush masses of obdurate metal before it—draw out, without breaking, a thread as fine as gossamer, and lift a ship-of-war like a bauble in the air. It can embroider muslin and forge anchors—cut steel into ribands, and impel loaded vessels against the fury of the winds and waves.



WATT'S FIRST ENGINE.

A cylinder; B boiler; C condenser; c c c casing; e e eduction pipe; f furnace; g g pipes for showing height of water in boiler; h pipe for supplying boiler; m n pump wrought by engine itself; p piston; r piston-rod; s pipe for conveying steam to top of cylinder; v v valves; w w w w cold water cistern; y y airpump.

It would be difficult to estimate the value of the benefits which these inventions have conferred upon this country. There is no branch of industry that has not been indebted to them; and, in all the most material, they have not only widened most magnificently the field of its exertions, but multiplied a thousandfold the amount of its productions. It is to the genius of one man, too, that all this is mainly owing! And certainly no man ever bestowed such a gift on his kind. The blessing is not only universal, but unbounded; and the fabled inventors of the plough and the loom, who were deified by the erring gratitude of their rude contemporaries, conferred less important benefits on mankind than the inventor of our present steam-engine.

This will be the fame of James Watt with future generations; and it is sufficient for his race and his country. But to those to whom he more immediately belonged, who lived in his society and enjoyed his conversation, it is not, perhaps, the character in which he will be most frequently recalled, most deeply lamented, or even most highly admired. Independently of his great attainments in mechanics, Mr. Watt was an extraordinary, and, in many

respects, a wonderful man. Perhaps no individual in his age possessed so much and such varied and exact information—had read so much, or remembered what he had read so accurately and well. He had infinite quickness of comprehension, a prodigious memory, and a certain rectifying and methodizing power of understanding, which extracted something precious out of all that was presented to it. His stores of miscellaneous knowledge were immense, and yet less astonishing than the command he had at all times over them. It seemed as if every subject that was casually started in conversation with him had been that which he had been last occupied in studying and exhausting—such was the copiousness, the precision, and the admirable clearness of the information which he poured out upon it, without effort or hesitation. Nor was this promptitude and compass of knowledge confined in any degree to the studies connected with his ordinary pursuits. That he should have been minutely and extensively skilled in chemistry and the arts, and in most of the branches of physical science, might perhaps have been conjectured; but it could not have been inferred from his usual occupations, and probably is not generally known, that he was curiously learned in many branches of antiquity, metaphysics, medicine, and etymology, and perfectly at home in all the details of architecture, music, and law. He was well acquainted, too, with most of the modern languages, and familiar with their most recent literature. Nor was it at all extraordinary to hear the great mechanician and engineer detailing and expounding for hours together the metaphysical theories of the German logicians, or criticising the measure or the matter of German poetry. —JEFFREY.

THE BATTLE OF NASEBY.

(A.D. 1645.)

THE battle occurred in the middle of June 1645. Charles was at Harborough when he heard that Fairfax had drawn off from Oxford, and he resolved to advance towards him. The king and all about him were in high spirits, fully believing that the parliament army was in a disorganized state, that the new model which had just been adopted was unsuccessful, and that he had but to appear, and victory would at once of necessity declare for him.

Charles advanced to Daventry, where he waited several days for more correct intelligence of the movements of the enemy.

Intelligence came, but of another kind than he expected. Fairfax, he learned, was close at hand; he had reached Northampton with an army more considerable than had been reported to him, and in good condition. This being the case, he resolved to fall back upon Harborough, and from thence proceed as rapidly as he might to Leicester. Meanwhile Fairfax had not been idle. Anticipating an engagement, he had written to the parliament, requesting that Cromwell might be spared from his attendance at the House of Commons, in order to take command of the horse, an engagement being likely to happen speedily. On Friday, (June 13,) a council of war is summoned to determine what it is best to do. While the debate is going forward, a loud noise is heard in the camp. Cromwell is come! and "the horse gave a mighty shout for joy of his coming to them." He has brought, too, seven hundred of his own Ironsides with him—good men all—but himself a host. There is little hesitancy now. Onward is the word. An alarm soon reaches Harborough that the Roundheads are at hand—that they are quartered within six miles. No chance of reaching Leicester now—that is plain enough, whatever else is doubtful. "A council was presently called, and the former resolution of retiring presently laid aside, and a new one

as quickly taken, 'to fight,' to which there was always an immoderate appetite when the enemy was within any distance. They would not stay to expect his coming, but would go back to meet him. And so, in the morning early, being Saturday, the 14th of June, all the army was drawn up upon a rising ground of very great advantage, about a mile south from Harborough, (which was left at their back,) and there put in order to give or receive the charge." But they did not stay there. Fairfax had set out from his quarters by daybreak, and after a march of an hour or two, sees some of the king's troops on the high grounds before him. Charles had been led to move his troops from their former, and, as it should seem, preferable position, owing to his misconceiving the purport of some movements on the part of his adversary, and now had scarcely time to arrange his army before the enemy made signs of attacking him.

The position which the king's army had now taken is on the north-eastern side of Naseby field; the parliament's army occupies the hill about half a mile on the south. The deep hollow is between them. The order of battle is soon formed. On the king's side, Prince Rupert has the command of the right wing, Sir Marmaduke Langdale of the left, while the main body is commanded by Lord Ashley: the king being with the reserves, and having Lord Lindsay, Sir George Lisle, and others with him. On the opposite side, Cromwell commands the right, and Ireton the left wing; the centre is under the charge of the General (Fairfax) himself, and Major Skippon; Ramsborough, Hammond, and Pride, commanding the reserves. Each party forms a line stretching across the field; the order of each is similar—the infantry being in the centre, with the cavalry as wings. Yonder hill, where the king's troops are, is Broad Moor; they have a warren on their left. This, whereon the parliament's army is ranged, is Mill Hill; that, Fenny Hill on the left; a troop of Ireton's dragoons is behind the hedge that divides Naseby and Sulby Honours. Both armies are well placed; it is clear, though, that Cromwell has herein the advantage. He has secured such a position as to screen a considerable part of his men, by means of the broken ground, from the observation of the enemy, while he commands a full view of them, and can detect at once all their movements. In numbers there is little difference between them. In courage they are equal, but not in confidence. That "mighty shout" of the horse yesterday, when "Fairfax's invincible lieutenant" came, was it not a presage of victory?

Fairfax himself, too, his looks were pale as death yesterday, but now he is all alacrity; "his soldiers see in his cheerful countenance the promise of victory." On the other side, the cavalry is full of assurance, but the infantry is hardly so hopeful. Those marchings and countermarchings, and constant changing of plans, do not speak well for their commanders' decision and clear-sightedness. A mighty difference; it is the hour of life or death, and they cannot confide in their leaders' firmness and foresight, on which both depend! But they are brave men, and will do bravely. The Royalists place bean-stalks in their hats; the others have no directions on the subject—a few, of their own accord, put up some white paper or linen, the rest carry no mark.

Thus, then, these twenty thousand men stand face to face on that fair summer morning, waiting for the word in order to fall upon each other. The broad moor glows with the broom in full flower,—its golden glory mingling with the lowlier blossoms of the heath. The wind blows sharply from the north-west, and there is a little preparatory manœuvring to obtain the advantage of it. A few shots are fired from the scanty artillery on either side. And see, a forlorn hope of three hundred musketeers advances towards the royal army; its orders are to advance steadily, to wait in the vale until it is charged, and then fall back as steadily as it advanced. The battle is begun. Rupert with his right approaches the left of his opponents. He charges swiftly, terribly, crying, "Queen Mary!" while the answering shout is, "God is our strength!" Brave is the meeting. Ireton is not made to yield, bravely is that fierce charge encountered, but it is irresistible. Ireton is borne down, his horse is killed, himself thrust through the thigh with a halberd, and wounded in the face; his eyes become dim, he is carried off a prisoner, and his troops fly swiftly, while Rupert's as swiftly pursue them. How fares it on the other wing? Has the Invincible given way? Not he. Langdale charged him, but he yielded not a step. His Ironsides charged in turn—like a torrent driving all before them. Down they push into that narrow valley, conquerors and conquered; but his clear eye sees when to stay the pursuit. He drives them fairly from the field, far enough to prevent them rallying, then he as quickly returns to it. Work is yet to do there, and he well knew his work is undone while anything remains to do,—scattered troops may rally, but the danger is from those who stand.

With those in the centre there has been hot work. Ashley

comes on with ready energy—there is one discharge on each side, and then, closing, they meet hand to hand, fighting with the butt-ends of their muskets. For a brief space this continues, then all of the Roundheads, but Fairfax's own regiment, give way. But they rally. The general, bareheaded, (for he lost his helmet in the first charge,) with a "spirit heightened above the ordinary spirit of man," thinks not for a moment of retreat. He is "to and again in the front, carrying orders, bringing on divisions in thickest dangers, and with gallant bravery." Skippon, too, is busy; he brings on a troop that is not quite disorganized, but in doing it is shot in the side, "yet still leads them on." Nor will he quit the field though Fairfax desires him. "No, general, I will not stir," replies the brave old man; "I will not stir while a man will stand." But the disorder is too great to be remedied. Then the commanders with their colours, and such of the soldiers as are firm, fall into the reserves, order is re-established, and these fresh troops advancing, quickly compel the wearied Royalists to fly. Not all! there stands one regiment "like a rock." Again and again Fairfax charges, but they stand rock-like still, though their comrades have all deserted them; and though the king, for whom they are dying, stands with his untouched reserve idly on the hill there. What heed they? They know their duty, and will do it. Grievous is it to see brave men thus stand hopeless. Fairfax despatches Skippon with his regiment to the other side, and so with sharp shots, with heavy blows, they beat their way through that rock, and meet in the middle. It is battered down, crushed. But why stand those reserves idly there? Will decision never reach their counsels? The king will charge—is ready to do so—plainly must do so—is not the foot everywhere breaking? He places himself at the head of his guards, but the Earl of Carnwath, who rides next him, "lays his hand on the bridle of the king's horse, and with two or three foul-mouthed Scottish oaths, cries, 'Will you go upon your death in an instant?' and before the king understands what he will have, turns his horse round." Straight flies the word—"The king runs, every one shift for himself!"—and without a blow—without advancing towards the field—all of that reserve fly as though the Invincible was indeed upon them.

But where tarries Rupert all this while? Alas! he is a gallant soldier, but not a wise one. He drove far the troops who fled before him—too far, but he returned at last. The foolish boy! he comes upon the train of his adversaries on his return, and

must needs stay to take it. He wants trophies—his men want booty, and so they fall on there, while their fellows are being hewed to pieces in the field—clean forgotten! But the train is well guarded—Cromwell is not a careless soldier—and Rupert cannot make an impression upon it. Again he tries, but it is in vain. Again? No—"To the field." It is too late; all is lost there, and he has some difficulty in rejoining the king, who has rallied his reserves about half a mile beyond his old station. Meanwhile Cromwell had returned and completed the work of destruction in the field; then calling off their men, the generals put them again in order, and they advance ready for battle as at first.

Not so with the king's men. "One charge more and we regain the day," pleads he, and pleads in vain. Rupert's men declare they have acted their parts—the battle is over, they will not begin the day again. They have no "cause" to fight for. "This difference was observed shortly from the beginning of the war," Clarendon tells us, "in the discipline of the king's troops, and of those which marched under the command of Cromwell—that though the king's troops prevailed in the charge, and routed those they charged, they never rallied themselves again in order, nor could be brought to make a second charge again the same day; whereas Cromwell's troops, if they prevailed, or though they were beaten and routed, presently rallied again and stood in good order till they received new orders." In vain, therefore, was it to entreat them to stand when they saw those men before them closing steadily upon them. They retreat slowly at first, but ever quickening till retreat becomes a chase for life or death. It was "extreme" hot work, as one who was in it said, and hot was the chase afterwards. "We pursued them," said Cromwell in his letter written directly after, "from three miles short of Harborough to nine beyond, even to sight of Leicester, whither the king fled." And now, when a peaceful peasant is digging a trench in some of the meadows, or by the road side, it often happens that his spade strikes upon the bones of one of those poor stragglers. From Naseby to Leicester—a weary sixteen miles for those miserable men. What was it to them that the fields were fair, that the trees were bending beneath their graceful foliage, that the gentle sun was sliding softly and in beauty towards the west?—they dared not even stoop to drink from the brook murmuring so gently by the wayside, heedless of all that bloody work. Frightful was the encounter, more terrible the flight. —THORNE.

CROMWELL'S EXPULSION OF THE PARLIAMENT.

(A.D. 1653.)

At this eventful moment, big with the most important consequences both to himself and his country, whatever were the workings of Cromwell's mind, he had the art to conceal them from the eyes of the beholders. Leaving the military in the lobby, he entered the Parliament House, and composedly seated himself on one of the outer benches. His dress was a plain suit of black cloth, with gray worsted stockings. For a while he seemed to listen with interest to the debate; but when the Speaker was going to put the question, he whispered to Harrison, "This is the time; I must do it;" and, rising, put off his hat to address the House.

At first his language was decorous, and even laudatory. Gradually he became more warm and animated. At last he assumed all the vehemence of passion, and indulged in personal vituperation. He charged the members with self-seeking and profaneness, with the frequent denial of justice, and numerous acts of oppression; with idolizing the lawyers, the constant advocates of tyranny; with neglecting the men who had bled for them in the field, that they might gain the Presbyterians, who had apostatized from the cause; and with doing all this in order to perpetuate their own power, and to replenish their own purses. But their time was come; the Lord had disowned them; He had chosen more worthy instruments to perform His work.

Here the orator was interrupted by Sir Peter Wentworth, who declared that he had never heard language so unparliamentary—language, too, the more offensive, because it was addressed to them by their own servant, whom they had made what he was. At these words, Cromwell put on his hat, and, springing from his place, exclaimed, "Come, come, sir, I will put an end to your prating!" For a few seconds, apparently in the most violent agitation, he paced forward and backward, and then, stamping on the floor, added, "You are no parliament! I say you are no parliament! Bring them in, bring them in!" Instantly the door opened, and Colonel Worsley entered, followed by more than twenty musketeers.

"This," cried Sir Henry Vane, "is not honest; it is against morality and common honesty." "Sir Henry Vane!" replied Cromwell; "O Sir Henry Vane! The Lord deliver me from

Sir Henry Vane! He might have prevented this. But he is a juggler and has not common honesty himself!" From Vane he directed his discourse to Whitelock, on whom he poured a torrent of abuse; then pointing to Chaloner, "There," he cried, "sits a drunkard;" and afterwards selecting different members in succession, he described them as dishonest and corrupt livers, a shame and scandal to the profession of the gospel. Suddenly, however, checking himself, he turned to the guard, and ordered them to clear the house. At these words, Colonel Harrison took the Speaker by the hand, and led him from the chair; Algernon Sydney was next compelled to quit his seat; and the other members, eighty in number, on the approach of the military, rose and moved towards the door.

Cromwell now resumed his discourse. "It is you," he exclaimed, "that have forced me to do this. I have sought the Lord both day and night, that He would rather slay me than put me on the doing of this work." Alderman Allan took advantage of these words to observe that it was not yet too late to undo what had been done; but Cromwell instantly charged him with peculation, and gave him into custody. When all were gone, fixing his eye on the mace, "What," said he, "shall we do with this fool's bauble? Here, carry it away." Then, taking the act of dissolution from the clerk, he ordered the doors to be locked, and, accompanied by the military, returned to Whitehall.

That afternoon the members of the Council assembled in their usual place of meeting. Bradshaw had just taken the chair, when the Lord-General entered, and told them that if they were there as private individuals, they were welcome; but if as the council of state, they must know that the parliament was dissolved, and with it also the council. "Sir," replied Bradshaw, with the spirit of an ancient Roman, "we have heard what you did at the house this morning, and before many hours all England will know it. But, sir, you are mistaken to think that the parliament is dissolved. No power under heaven can dissolve them but themselves; therefore, take you notice of that."

After this protest they withdrew. Thus, by the parricidal hands of its own children, perished the Long Parliament, which, under a variety of forms, had, for more than twelve years, defended and invaded the liberties of the nation. It fell without a struggle or a groan, unpitied and unregretted. The members slunk away to their homes, where they sought by submission to purchase the forbearance of their new master; and their partisans

—if partisans they had—reserved themselves in silence for a day of retribution, which came not before Cromwell slept in his grave. —LINGARD.

FUNERAL ORATION ON QUEEN HENRIETTA OF ENGLAND.

THE most eloquent and original of Bossuet's writings is his funeral oration on Henrietta, Queen of England, wife of the unfortunate Charles I. It was natural that such an occasion should call forth all his powers, pronounced as it was on a princess of the blood-royal of France, who had undergone unparalleled calamities with heroic resignation, the fruit of the great religious revolution of the age, against which the French prelate had exerted all the force of his talents.

"Christians!" says he, in the exordium of his discourse, "it is not surprising that the memory of a great queen, the daughter, the wife, the mother of monarchs, should attract you from all quarters to this melancholy ceremony; it will bring forcibly before your eyes one of those awful examples which demonstrate to the world the vanity of which it is composed. You will see in her single life the extremes of human things: felicity without bounds, miseries without parallel; a long and peaceable enjoyment of one of the most noble crowns in the universe, all that birth and grandeur could confer that was glorious, all that adversity and suffering could accumulate that was disastrous; the good cause, attended at first with some success, then involved in the most dreadful disasters. Revolutions unheard of, rebellion long restrained, at length reigned triumphant; no curb then to licence, no laws in force. Majesty itself violated by bloody hands, usurpation and tyranny under the name of liberty—a fugitive queen who can find no retreat in her three kingdoms, and was forced to seek in her native country a melancholy exile. Nine sea-voyages undertaken against her will by a queen, in spite of wintry tempests—a throne unworthily overturned, and miraculously re-established. Behold the lesson which God has given to kings! Thus does He manifest to the world the nothingness of its pomps and its grandeur! If our words fail, if language sinks beneath the grandeur of such a subject, the simple narrative is more touching than aught that words can convey. The heart of a great queen, formerly elevated by so long a course of prosperity, then steeped in all the bitterness of affliction, will speak in

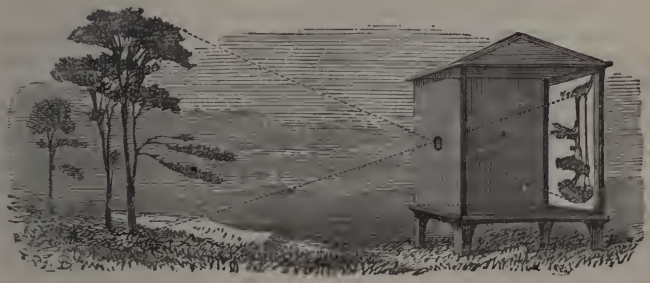
sufficiently touching language; and if it is not given to a private individual to teach the proper lessons from so mournful a catastrophe, the king of Israel has supplied the words—'Hear! O ye great of the earth! take lessons, ye rulers of the world!'

"But the wise and devout princess, whose obsequies we celebrate, has not merely been a spectacle exhibited to the world in order that men might learn the counsels of Divine Providence, and the fatal revolutions of monarchies. She took counsel herself from the calamities in which she was involved, while God was instructing kings by her example. It is by giving and withdrawing power that God communicates His lessons to kings. The queen we mourn has equally listened to the voice of these opposite monitors. She has made use, like a Christian, alike of prosperous and adverse fortune. In the first she was beneficent, in the last invincible; as long as she was fortunate, she let her power be felt only by her unbounded deeds of goodness; when wrapt in misery, she enriched herself more than ever by the heroic virtues befitting misfortune. For her own good she has lost that sovereign power which she formerly exercised only for the blessings of her subjects; and if her friends—if the universal Church have profited by her prosperities, she herself has profited more from her calamities than from all her previous grandeur. That is the great lesson to be drawn from the ever-memorable life of Henrietta Maria of France, Queen of Great Britain.

"I need not dwell on the illustrious birth of that princess; no rank on earth equals it in lustre. Her virtues have been not less remarkable than her descent. She was endowed with a generosity truly royal; of a truth, it might be said, that she deemed everything lost which was not given away. Nor were her other virtues less admirable. The faithful depositary of many important complaints and secrets—it was her favourite maxim that princes should observe the same silence as confessors, and exercise the same discretion. In the utmost fury of the Civil Wars, never was her word doubted, or her clemency called in question. Who has so nobly exercised that winning art which humbles without lowering itself, and confers so graciously liberty while it commands respect? At once mild yet firm—condescending yet dignified,—she knew at the same time how to convince and persuade, and to support by reason, rather than enforce by authority. With what prudence did she conduct herself in circumstances the most arduous; if a skilful hand could have saved the state, hers was the one to have done it.

Her magnanimity can never be sufficiently extolled. Fortune had no power over her; neither the evils which she foresaw, nor those by which she was surprised, could lower her courage. What shall I say to her immovable fidelity to the religion of her ancestors? She knew well that that attachment constituted the glory of her house, as well as of the whole of France, sole nation in the world which, during the twelve centuries of its existence, has never seen on the throne but the faithful children of the Church. Uniformly she declared that nothing should detach her from the faith of St. Louis. The king, her husband, has pronounced upon her the noblest of all eulogiums, that their hearts were in union in all but the matter of religion; and confirming by his testimony the piety of the queen, that enlightened prince has made known to all the world at once his tenderness, his conjugal attachment, and the sacred, inviolable dignity of his incomparable spouse."

ALISON'S *Essays.*



OPTICS—LIGHT.

LIGHT is the emanation from luminous or illuminated bodies which makes them visible to the eye. Some philosophers suppose it to be a subtle and extremely attenuated fluid—a real substance, yet so fine as to have no appreciable weight; and others suppose it to be merely the undulation or vibration of an ethereal medium, which is luminous when in motion, and dark when in repose. Light may be flung from one illuminated body to another, and from a second to a third; but in every case it must come, in the first instance, from a self-luminous body. Its

grand source throughout the solar system is the sun; a minor source of it, in this part of the universe, is the fixed stars; and the local sources of it in our world are principally the flashes of the electric fluid, the glow of phosphorescence, and the flame and red-heat of combustion. It is always of the same color as the body from which it comes; it always moves in straight lines, and consists of rays, related to one another in some such way as the straws of a sheaf of corn; and it streams from every visible point of the body which emits it, and in every direction whence that point can be seen. It passes through transparent substances, whether gaseous, liquid, or solid, but is variously bent by them, or turned from the line of its previous course, according to their density and other circumstances; and it is partly absorbed and partly flung back by non-transparent bodies, in a diversity of ways, and with most gorgeous appearances, but under uniform and well-known laws. The light of the sun has been ascertained to take only seven minutes and a half to travel to the earth, or to move through a space equal to the circumference of our globe in the eighth part of a second; and all other light is presumed to travel at the same rate.

When a small sunbeam is admitted to a dark room through a little hole of a window-shutter, and projected on a white screen or on a sheet of paper, the insertion in it of a triangular piece of glass, technically called a prism, separates it into a series of splendid colors exactly similar to those of the most perfect and brilliant rainbow. This is termed the spectrum, and comprises always the same colors in the same order. The red is at the end which is least refracted, and the violet at the other end; and if the whole be artificially divided into three hundred and sixty parts, the red will be found to occupy forty-five of these parts, the orange twenty-seven, the yellow forty-eight, the green sixty, the blue sixty, the indigo forty, and the violet eighty. When all the series, or the entire spectrum, is caught upon a lens of such a form as to concentrate it to one spot, it reproduces the white sunbeam, or original colorless light. The different colors possess different powers, and are technically regarded as different rays. The lightest green and deepest yellow are the most illuminating; and either the violet or a dark space immediately beyond it, is the most heating; and the spectrum as a whole affords ample scope for wondering inquiry and keen investigation as to its action on living organisms, on photographic preparations, and on select objects in the chemist's

laboratory. The light of the moon, and various lights of combustion too, differ in their properties or actions from one another, and from the light of the sun. In all cases, however, the degree of brightness depends on the extent of the undulations, and the predominance of any ray or color depends on their number.

The varied refraction of light in our atmosphere is the cause of twilight, and of all the tints and magnificence of landscape, cloud, and sky. Were the atmosphere wanting, or did it not possess the power of deflecting and diffusing light at a great variety of angles, and with a great variety of effects, the sun would rush up from night in a moment in the morning, and pass over the hemisphere in a uniform garish blaze through the day, and plunge back to night in a moment at sunset. This rising would resemble the sudden kindling of a bonfire by a great charge of gunpowder; his walk over the sky would resemble the steady flame of that fire, without flicker or diversity; and his setting would resemble the instantaneous extinction of it by the fall of a waterspout. He would glare in the face of observers who looked at him, but would give them no light when they turned their back to him, and would never, in any circumstances, throw illumination, or color, or the charms of perspective, on either the outspread earth or the overarching sky. Sunshine would scarcely do more for the world, or do it much differently, than a flambeau does at midnight for a mountain glen.

"The number of objects in the heavens would, indeed, be augmented, for the stars would shine through a canopy as black as ebony, even when the sun was above the horizon; but all the gay coloring of the terrestrial landscape, which now delights the eye and the imagination, would be for ever veiled from the inhabitants of the world. In such a state of things, it would be always night, and the difference between such a night and that which we now enjoy would be, that the celestial orbs, instead of being grounded on a beautiful azure sky, would appear on a black canopy, like so many white points on a dismal mourning carpet."

Sunbeams entering the atmosphere in any other direction than the perpendicular one, but especially sunbeams entering it in a very slanting manner, as all do when the sun is far down the vault and near the horizon, undergo a long series of flexure through the various densities of gas and vapour before they reach the ground. They sustain little, indeed, in the higher regions of the air, where its density is very attenuated, and where no vapors ever exist in sufficient quantity to form a cloud; but in strug-

gling through the increasingly thick masses of the last two or three miles, they undergo so much as to be eventually bent almost like the segment of a hoop. Hence, as the lower end of a stick inserted in clear water appears to the eye several degrees away from what is known to be its true position, an object in the sky exactly on a line with the horizon appears to the eye to be a considerable distance above the horizon. The sun and the moon, therefore, are always visible at their rising some little time before they actually rise, and continue visible at setting some time after they actually set. And when an eclipse of the moon happens, as on rare occasions it does, exactly at the time of sunset and of moonrise, the curious spectacle is beheld of the sun in full orb on the one rim of the sky, and the moon in full orb darkened by the earth's shadow, on the other. The earth is then in the exact line between them; yet, in consequence of the refraction of the light through her atmosphere, she appears to the eye to be considerably below both. —Rev. J. M. Wilson.

INVOCATION TO LIGHT.

Hail, holy Light! offspring of Heaven, first-born;
Or of the Eternal co-eternal beam
May I express thee unblamed? since God is light,
And never but in unapproachèd light
Dwelt from eternity; dwelt then in thee,
Bright effluence of bright essence increate.
Or hear'st thou rather, pure ethereal stream,
Whose fountain who shall tell? Before the sun,
Before the heavens thou wert; and at the voice
Of God, as with a mantle, didst invest
The rising world of waters, dark and deep,
Won from the void and formless infinite.
Thee I revisit now with bolder wing,
Escaped the Stygian pool, though long detain'd
In that obscure sojourn; while in my flight
Through utter and through middle darkness borne,
With other notes than to the Orphean lyre,
I sung of Chaos and eternal Night;
Taught by the heavenly muse to venture down
The dark descent, and up to reascend,
Though hard and rare. Thee I revisit safe,
And feel thy sovran vital lamp: but thou
Revisit'st not these eyes, that roll in vain
To find thy piercing ray, and find no dawn;

So thick a drop serene hath quench'd their orbs,
Or dim suffusion veil'd. Yet not the more
Cease I to wander, where the Muses haunt
Clear springs, or shady grove, or sunny hill,
Smit with the love of sacred song; but chief
Thee, Sion, and the flowery brooks beneath,
That wash thy hallow'd feet, and warbling flow,
Nightly I visit: nor sometimes forget
Those other two, equall'd with me in fate,
So were I equall'd with them in renown,
Blind Thamyris, and blind Mæonides,
And Tiresias, and Phineus, prophets old:
Then feed on thoughts, that voluntary move
Harmonious numbers; as the wakeful bird
Sings darkling, and in shadiest covert hid,
Tunes her nocturnal note. Thus with the year
Seasons return; but not to me returns
Day, or the sweet approach of even or morn,
Or sight of vernal bloom, or summer's rose,
Or flocks, or herds, or human face divine;
But cloud instead, and ever-during dark
Surrounds me, from the cheerful ways of men
Cut off, and for the book of knowledge fair
Presented with a universal blank
Of nature's works, to me expunged and rased,
And wisdom at one entrance quite shut out.
So much the rather thou, celestial light,
Shine inward, and the mind through all her powers
Irradiate: there plant eyes, all mist from thence
Purge and disperse, that I may see and tell
Of things invisible to mortal sight. —Milton.

BLIND BARTIMEUS.

"Oh, lone and lorn my lot!
To me the sunbeam is a joy unknown;
In vain earth's lap with rarest flowers are strewn—
I crush, but see them not.

"The human face and form,
So glorious, as they tell, are all to me
A strange and unimagined mystery,
Dark as the midnight storm.

"Winter's sharp blast I prove,
But cannot gaze upon the mantle white
With which the widow'd earth she doth bedight,
In rough but honest love."

Sudden a mighty throng,
Tumultuous, pass'd that beggar's muddy lair,
And listlessly he ask'd in his despair
Why thus they press'd along.

A friendly voice replied,
"Jesus, the Man of Nazareth, is here."
The words with strange power fell upon his ear,
And eagerly he cried:

"Jesus! our David's son,
Have mercy on me for Jehovah's sake;
Pity, Emmanuel—pity do Thou take—
'Mid thousands I 'm alone!"

The multitude cried, "Cease!
The Master will not pause for such as thou,
Nobler by far His purposes, we trow;
Silence, thou blind one—peace!"

But bold with misery,
He heeded not the taunt of selfish pride;
More eagerly and earnestly he cried,
"Have mercy, Christ, on me!"

The ever-open ear
Heard, and heard not unmoved that quivering voice:
"Come hither!" Hundreds now exclaim'd—"Rejoice;
He calls; be of good cheer!"

How rare—how passing sweet
Sounded these words of hope; he cast away
His garment, lest its folds his course might stay,
And fell at Jesus' feet.

"What would'st thou?" Wondrous bright
The beggar's visage glow'd—he felt right sure
That voice, so Godlike, straight would speak his cure—
"Lord, that I may have sight!"

He never knew suspense:
"Receive thy sight, thou dark one, for thy faith!"
And lo! convulsively he draws his breath,
Entranced with his new sense.

Did Bartimeus seek
Once more his ancient nook of beggary?
Oh no!—he felt that he could gaze for aye
On Jesus' face so meek.

Love would not let him stay—
His darken'd soul was lighten'd, like his eyes;
And from that hour the Lord whom he did prize
He follow'd in the way. —R. J. M'GEORGE.

THE BLIND GIRL.

SHE sits in silence all the day,
Our little gentle one,
And basketh in the welcome ray
Of the glorious summer sun;
The warm beams falling on her brow
Shed gladness through her mind,
But ne'er may she the radiance know—
The little one is blind.

Her small hands hold a blushing wreath
Of lovely forest flowers;
Oh, well she loves your fragrant breath,
Sweet friends of summer hours!
But not for her each gorgeous hue
O'er your fair petals spread;
Alike to her the violet's blue,
And rose's glowing red.

She looketh towards the quiet sky
In the still summer night,
But vainly on her darken'd eye
Falleth the pale moonlight.
In vain from their bright home above
The peaceful stars gaze down;
She knoweth not their looks of love
From gathering tempest's frown.

A mother speaketh to her child
In accents mild and sweet,
A brother through the woodpath wild
Guideth her wandering feet;
Each kindly deed, each gentle tone,
Thrills to her heart's deep cell—
What would she give to look upon
The friends she loved so well!

And thou shalt see their faces yet,
Stricken, yet blessed one!
When all earth's ransom'd ones are met
Before the eternal throne:

The cloud that dims thy vision now
Shall at a word be riven;
And the first light thine eyes shall know
Shall be the light of heaven.

—Miss Page.

WAR BETWEEN THE IROQUOIS AND ERIES.

(A.D. 1657.)

The nation of the Cats, or Eries, had sent thirty ambassadors to the Iroquois, to confirm the peace which had existed between them; but it happened that an Iroquois was killed in an accidental encounter by one of the Cat nation. His murder so exasperated the Iroquois that they put to death the ambassadors who were among them, with the exception of five who escaped. Thus, then, war was kindled between these two nations; the question now was who should get most prisoners to burn. Among others, two Onondagas were taken by the Cats; one escaped, and the other, a man of some importance, having been brought to the village to undergo the fiery ordeal, pleaded his cause so well, that he was given to the sister of one of the thirty ambassadors put to death. She was not then in the village, but they did not fail to attire the man in gay habiliments; feasting and good cheer alone prevailed. They assured him that he should be sent back to his country. When she to whom he had been given returned, they informed her that her dead brother had come to life again, and that she must prepare to treat him well and to dismiss him graciously. She, on the other hand, commenced to weep; she protested that she would never dry her tears till the death of her brother was avenged. The elders represented to her the importance of the matter—that it would bring a fresh war upon their hands—but she cared nothing for that. At last, they were obliged to give up the unfortunate man to her will. While this conference was going on, he had been delighting himself at the banquet. They dragged him away from the feast, and led him into the wigwam of this cruel woman without speaking. Upon his entrance, he was surprised that they took away his fine attire: soon he saw that his death was decided on. Before dying, he cried out that they were burning a whole people in his person, and that his death would be cruelly avenged. This was true; for the news had hardly been carried to the camp of the Onon-

dagas,* when twelve hundred determined men started on the war-path, to obtain satisfaction for this affront.

The nation of the Cats bears this name on account of the great number of very large and handsome wild-cats found in the country which it occupies. This country is very temperate; neither ice nor snow is seen there in winter, and during the summer grain and fruit of extraordinary size and quality are, it is said, gathered there.

The Onondaga warriors made such rapid marches, that although far from their own village, they arrived in the enemy's country without it being known. This spread such an alarm, that villages and houses were abandoned to the mercy of the conquerors, who, after having burned everything, set out in pursuit of the fugitives. These numbered two or three thousand warriors, exclusive of the women and children. Finding themselves closely pursued, they resolved, after a flight of five days, to make a log-fort, and there to await their enemies, who numbered only twelve hundred. They intrenched themselves as well as they were able. Soon the enemy made his advances; two of the most distinguished chiefs, dressed after the French fashion, appeared, in order to frighten the Cats by the novelty of their garb. One of them, who had been baptized by Father Le Moine, and was well educated, mildly requested the besieged to surrender, failing which no quarter would be shown them. "The Lord of Life fights for us," said he, "and you are lost if you resist Him." "Who is lord of our lives?" replied the besieged, haughtily; "we recognize no others than our arms and our hatchets." Thereupon the assault was made; the palisade was attacked on all sides, and as well defended as attacked. For a long time the battle lasted, and with great carnage on both sides. The besiegers made every effort to carry the place by storm, but it was in vain: all who showed themselves were killed. The assailants formed the plan of using their canoes as shields, and, under the shelter they afforded, arrived at the foot of the intrenchments. But they had yet to clear the great stakes and logs of which it was built. They piled up their canoes, and made use of them as scaling-ladders to mount this high palisade. Such boldness so much amazed the besieged, that, being already at the end of their ammunition, with which, especially powder, they had been ill-provided, they took to flight, thus causing their own destruction; for most of the foremost fugitives having been killed, the rest

* One of the five tribes of which the Iroquois confederacy consisted.

were hemmed in by the Onondagas, who entered the fort, and made such a slaughter of women and children that in some places there was blood up to the knee. Those who had escaped, wishing to regain their honor, after having collected their courage, in a short time retraced their steps, to the number of three hundred, with the intention of surprising the enemy while off his guard. The design was good, but it was badly executed; for, being terrified at the first cry the Onondagas made, they were entirely defeated. The conquerors also lost a number of their men, so that they were obliged to remain two months in the enemy's country to bury their dead and heal their wounded.

—*Relations des Jesuites.*

THE GREAT PLAGUE OF LONDON.

(A.D. 1665.)

April 30th.—Great fears of the sickness here in the city, it being said that two or three houses are already shut up. God preserve us all!

May 7th.—The hottest day that ever I felt in my life. This day, much against my will, I did in Drury Lane see two or three houses marked with a red cross upon the doors, and "Lord, have mercy upon us," writ there; which was a sad sight to me, being the first of the kind that, to my remembrance, I ever saw.

July 12th.—A solemn fast-day for the plague growing upon us.

13*th.*—Above 700 died of the plague this week.

18*th.*—I was much troubled to hear this day at Westminster how the officers do bury the dead in the open Tottle-fields, pretending want of room elsewhere.

20*th.*—Walked to Redriffe, where I hear the sickness is, and indeed is scattered almost everywhere, there dying 1089 of the plague this week. My lady Carteret did this day give me a bottle of plague-water home with me.

26*th.*—Sad news of the deaths of so many in the parish of the plague—forty last night. The bells always going. This day poor Robin Shaw, at Bäckewell's, died, and Backewell himself now in Flanders. The king himself asked about Shaw, and being told that he was dead, said that he was very sorry for it. The sickness is got into our parish this week, and is got, indeed, every-

where ; so that I begin to think of setting things in order, which I pray God enable me to put, both as to soul and body.

30*th.*—It was a sad noise to hear our bell toll and ring so often to-day, either for deaths or burials; I think five or six times.

31*st.*—The plague grows nightly upon us ; the last week dying about 1700 or 1800 of the plague.

August 3*d.*—To Dagenham, and all the way people, citizens, walking to and fro, inquire how the plague is in the city this week by the bill ; which by chance, at Greenwich, I had heard was 2020 of the plague, and 3000 and odd of all diseases.

8*th.*—To my office a little, and then to the Duke of Albemarle's about some business. The streets empty all the way now, even in London, which is a sad sight. And to Westminster Hall, where talking, hearing very sad stories from Mrs Mumford ; among others, of Mr Michell's son's family. And poor Will, that used to sell us ale at the hall door, his wife and three children died, all I think in one day. So home through the city again, wishing I may have taken no ill in going ; but I will go, I think, no more thither.

10*th.*—By and by to the office, where we sat all the morning ; in great trouble to see the bill this week rise so high—to above 4000 in all, and of them about 3000 of the plague. Home to draw over anew my will, which I had bound myself by oath to despatch to-morrow night ; the town growing so unhealthy, that a man cannot depend upon living two days.

12*th.*—The people die so, that now it seems they are fain to carry the dead to be buried by daylight, the nights not sufficing to do it in. And my Lord Mayor commands people to be within at nine at night, all, as they say, that the sick may have liberty to go abroad for air.

13*th.*—It was dark before I could get home, and so land at Churchyard stairs, where, to my great trouble, I met a dead corpse of the plague in the narrow alley, just bringing down a little pair of stairs. But I thank God I was not much disturbed at it. However, I shall beware of being late abroad again.

16*th.*—To the Exchange, where I have not been a great while. But, Lord ! how sad a sight it is to see the street empty of people, and very few upon the 'Change. Jealous of every door that one sees shut up, lest it should be the plague ; and about two shops in three, if not more, generally shut up.

31*st.*—This month ends with great sadness upon the public,

through the greatness of the plague everywhere through the kingdom almost. Every day sadder and sadder news of its increase. In the city died this week over 7000, and of them above 6000 of the plague. —PEPYS's *Diary*.

FROM "THE CITY OF THE PLAGUE."

TOGETHER will ye walk through long, long streets,
All standing silent as a midnight church.
You will hear nothing but the brown-red grass
Rustling beneath your feet; the very beating
Of your own hearts will awe you; the small voice
Of that vain bauble, idly counting time,
Will speak a solemn language in the desert.
Look up to heaven, and there the sultry clouds,
Still threatening thunder, lour with grim delight,
As if the Spirit of the Plague dwelt there,
Darkening the city with the shadows of death.
Know ye that hideous hubbub? Hark, far off
A tumult like an echo! On it comes,
Weeping and wailing, shrieks and groaning prayer;
And, louder than all, outrageous blasphemy.
The passing storm hath left the silent streets.
But are these houses near you tenantless?
Over your heads, from a window, suddenly
A ghastly face is thrust, and yells of death
With voice not human. Who is he that flies,
As if a demon dogg'd him on his path?
With ragged hair, white face, and bloodshot eyes,
Raving, he rushes past you; till he falls,
As if struck by lightning, down upon the stones,
Or, in blind madness, lash'd against the wall,
Sinks backward into stillness. Stand aloof,
And let the Pest's triumphant chariot
Have open way advancing to the tomb.
See how he mocks the pomp and pageantry
Of earthly kings! a miserable cart,
Heap'd up with human bodies; dragg'd along
By pale steeds, skeleton-anatomies!
And onwards urged by a wan meagre wretch,
Doom'd never to return from the foul pit,
Whither, with oaths, he drives his load of horror.
Would you look in? Gray hairs and golden tresses,
Wan shrivell'd cheeks that have not smiled for years,
And many a rosy visage smiling still;

Bodies in the noisome weeds of beggary wrapt,
With age decrepit, and wasted to the bone;
And youthful frames, august and beautiful,
In spite of mortal pangs,—there lie they all,
Embraced in ghastliness! But look not long,
For haply, 'mid the faces glimmering there,
The well-known cheek of some beloved friend
Will meet thy gaze, or some small snow-white hand,
Bright with the ring that holds her lover's hair.
Let me sit down beside you. I am faint
Talking of horrors that I look'd upon
At last without a shudder.

—JOHN WILSON.

ACOUSTICS—SOUND, HEARING, ECHO, AND MUSICAL NOTES.

SEC. 1. How does sound travel through the air? Let me try to answer this question. Imagine a row of boys standing close side by side, and that the last boy of the row stands close beside a wall or glass window. Suppose somebody to give the first boy a push in the direction of the line of boys; the first boy knocks against the second and recovers himself, the second knocks against the third, the third against the fourth, and so on, each boy recovering himself after he has sent on the push to the boy next him. The last boy of the row would be pushed up against the wall, or through the window, as the case might be.

Now, when a gun is fired, a percussion cap exploded, a bubble of explosive gas ignited, or when a peal of thunder occurs, the air at the place of explosion receives a sudden shock, and this shock is transmitted from particle to particle through the air, in a manner closely resembling the transmission of the push from boy to boy. There is a passage leading from the ear towards the brain; at a certain place a thin membrane called the tympanum is drawn across the passage, the membrane and the cavity which it stops being called the drum of the ear. Well, the air is pushed against the head of this drum, just as we have supposed the last boy of our row to be pushed against the wall or the window, only with infinitely greater rapidity. The membrane is thus thrown into motion, and this motion is communicated to the nerve of hearing. It is thus transmitted along the nerve to the brain, and there produces the sensation of sound. Nobody understands how

this motion is converted into a sensation; it is one of the mysteries of life, regarding which the youngest boy who reads this page knows just as much as I do myself.

How fast does the shock travel through the air?—in other words, What is the velocity of sound? The answer is, About 1100 feet a second. It travels more quickly in warm than in cold weather. Through water it travels about five times as fast as through air, and through wood it travels more than twice faster than it does through water. I once took a man and a hammer with me into Hyde Park, London, where there are very long iron rails. I placed my ear close to a rail, sent the man to a distance, and caused him to strike the rail with the hammer. For every blow he gave the rail *I heard two*, and the reason is, that the sound of each stroke travelled through the air and the iron at the same time; but through the iron it travelled with greater rapidity, and reached the ear sooner, the shock transmitted by the air arriving a little while afterwards. If the air were absent there could be no transmission of sound as at present; and where the air is very thin, as upon the tops of high mountains, the sound is much weakened. I fired a little cannon at the top of Mont Blanc last summer, and found the sound much weaker than when a similar cannon was fired on one of the Hampshire downs. This experiment was first made by the celebrated traveller, De Saussure. I may add that sound travels just as *quickly* in thin air as in dense air; it is only the *intensity* of the sound that is affected.

Sec. 2. Let us now seek to apply the little bit of knowledge we have gained in the foregoing section. Have you ever stood close beside a man when he has fired a gun? If so, you will have seen the flash and heard the explosion at one and the same time. But if you stand at a distance from the man, you see the flash first, and hear the sound afterwards. The reason is, that while the light of the flash moves almost instantaneously, the sound requires some time to travel to your ear. Now let me ask you a question or two. Suppose you have a good watch, which informs you that the time which elapses between the flash and the sound is three seconds, at what distance would you be from the man who fires the gun? Of course you could tell me in a moment. These three seconds are the time required by the sound to travel from the man to you, and as the velocity of sound through air is eleven hundred feet a second, the man must be three thousand three hundred feet distant. An equally simple calculation enables

you at once to tell whether a thunder-storm is dangerous or not. Each peal of thunder appears to be preceded by a flash of lightning; but if you were up in the clouds close to the place where the peal occurs, you would see the flash and hear the peal at the same moment, for they really occur together. If, therefore, a few seconds elapse between the flash and the peal, it is a proof that the danger is distant; but if the peal follow hot upon the flash, it shows that the danger is near. Never dread the sound; if the flash pass without injury, the subsequent peal can do no harm.

Sec. 3. I want you now to turn your thoughts for a moment to the row of boys, of which I have spoken in the first section. Suppose when the first boy is pushed up against the wall, that he, in recovering himself, pushes back against the boy next him, this second push, like the first, would propagate itself from the end to the beginning of the line of boys. In a similar way, when the pulse of air, which produces sound, strikes against a wall, it is *reflected* back, and constitutes an *echo*. The reflected wave of sound moves with exactly the same velocity as the direct one. Now, suppose a gun to be fired at a distance, 2200 feet from the side of a house or of a mountain which reflects the sound, what time will elapse between the sound and the echo? Here the sound has to travel from the gun to the wall, and back again, or a distance of 4400 feet; and as the velocity of sound is 1100 feet a second, four seconds will elapse before the echo is heard. If you reflect upon the matter, you will easily see that a wave of sound, after it has been once reflected, may strike upon a second object, which will reflect it a second time, and thus constitute a second echo. It is customary, when travelling up the Rhine, to fire a cannon at a certain place where the banks of the river rise in steep high rocks; the waves of sound are reflected several times from side to side, thus producing a perfect bubble of echoes, resembling the roll of thunder. The echoes which may be aroused in some of the mountain glens in Switzerland even by the human voice, are perfectly wonderful. I have known a valley to be filled with the wildest melody by a little boy singing the mountain *jodel* as he sat upon a rock and watched his goats.

Not only do solid bodies reflect sound in this way, but clouds do it also; and this is undoubtedly one cause of the rumbling we hear after a peal of thunder. In firing cannon, it has been observed that when the sky was clear, the sound was sharp and echoless, but that as soon as clouds appeared above the horizon,

the sonorous waves striking against the clouds were reflected back again, and produced echoes. Sound is always reflected, wholly or partially, in passing from one medium to another. Even when sound passes from light to heavy air, a portion of it is reflected. This explains a singular effect which was observed by the celebrated traveller Humboldt. Being stationed some miles distant from the great falls of the river Orinoco, in South America, he found that during the night the sound of the waterfall was so loud that he could imagine himself close beside it. During the day, the sound was much feebler. You will perhaps think that this was quite natural, owing to the greater stillness of the night, but the fact was actually far otherwise. In those regions the night is far more noisy than the day. Under the noonday sun the forest beasts cease their yelling and roaring, and retire to sleep, while the innumerable swarms of insects which fill the air with their humming during the night, are all stilled. Now pay attention to the true explanation.

A large plain stretched between the place where M. de Humboldt was stationed and the waterfall, this plain being covered partially with grass, through which, however, a great number of rocks protruded. During the day these rocks became very hot —much hotter than the grass, and the consequence was, that over each rock during the day there was a column of light air—for you know that air swells and becomes light when heated, hence the sound of the waterfall in passing through the atmosphere over the plain, crossed perpetually from heavy to light, and from light to heavy air. At each passage a small portion of the sound was reflected, and this occurred so often, that before it reached the place where M. de Humboldt was stationed, the sound was greatly enfeebled. At night the rocks became cooled; there was no longer that great difference of temperature between them and the grass; the atmosphere was more homogeneous, and the sound passed through it without reflection: the consequence was that the roar of the cataract was much louder during the night than during the day.

Sec. 4. In the first section I explained to you how a single pulse of sound was transmitted through the atmosphere, and what it did in the ear. I have said that the tympanum is thrown into motion by the shock. Now, every motion in nature, when once excited, takes *time* to subside. In the case of the tympanum the motion subsides very speedily, but still it requires time; and if you cause two shocks to follow each other with sufficient

speed, the last of them may reach the ear before the motion excited by the first has been extinguished, and thus a *prolonged* sound may be produced. Here I have to announce to you a most interesting fact,—*a musical sound* is a sound which is prolonged in this way. It is produced by a series of impulses which strike the ear at regular intervals, and in quick succession. In producing a musical sound, therefore, we make use of a body which is capable of sending a succession of waves to the ear,—a vibrating string or belt, a vibrating tongue, as in the Jew's harp and the concertina; a vibrating column of air, as in the flute or organ-pipe. The organs of voice are also capable of being thrown into vibration, like the reed of a clarionet, by the air passing from the lungs. But now I have to draw your attention to a peculiarity of these musical sounds or notes. They differ in *pitch*,—some notes are high and others low; and the height or pitch depends solely upon *the number of impulses which the tympanum receives in a second*. The greater the number of impulses per second, the higher the note. A string which vibrates 500 times in a second, produces a higher note than one which vibrates only 400 times a second. The shorter a string is, the more quickly it vibrates, and the higher the note that it produces. In like manner the shorter the organ-pipe or the flute—and you really shorten a flute when you take your fingers off its holes—the quicker its vibration, and the higher its notes. If space permitted, I might state to you the relative lengths of the strings, or of the organ-pipes, necessary for producing all the notes of the gamut. I will content myself by saying, that when one string is half the length of another, it vibrates twice as quickly, supposing both to be screwed up equally tight, and the note it produces is *the octave* of that produced by the longer string. Thus it is that by judiciously varying the lengths of a few strings, by pressing upon them with his fingers, a violin player is able to produce a great variety of notes.

A succession of *taps*, if they only follow each other speedily enough, will produce a musical note. When a slate-pencil, held loosely in the hand and perfectly upright, is drawn along a slate, every boy knows that a jumping motion of the pencil and a dotted line upon the slate are produced. A series of distinct taps of the pencil is also heard, but the sound is a mere rattle. By pressing upon the pencil, these taps can be caused to succeed each other more quickly, until finally a musical note is produced. Most people, it is true, shut their ears against this melody, and

complain that it gives them the toothache; but it is nevertheless a good illustration of our present subject. If a card be held against the circumference of a toothed wheel, it is struck by the teeth as they pass, and the distinct taps are heard; but if the wheel rotates rapidly enough, the separate taps are no longer distinguishable, but melt into a continuous musical note. A series of *puffs* can also produce a musical note. If a locomotive could send out its puffs quickly enough, we should have a musical sound of deafening intensity. Instruments have been made for the express purpose of producing taps or puffs, and such instruments are provided with machinery which tells us the exact number of puffs or taps accomplished in a second. By means of such instruments we can tell the exact number of vibrations produced by the organs of a singer. We have only to bring the instrument and the voice to the same pitch; the number of puffs then recorded by the instrument is the number of vibrations accomplished by the singer. In the same way the number of times a bee flaps its wings in a second can be accurately determined from the hum of the insect. In this way, indeed, it has been ascertained that gnats sometimes flap their little wings fifteen thousand times in a second!

How wonderful all this is, my boys, and how well worthy of your attention! And how beautiful does the arrangement appear, that Nature should possess such wonders, and that man should possess the power of investigating and understanding them!

—PROFESSOR TYNDALL.

THE DUMB CHILD.

SHE is my only girl;
I ask'd for her as some most precious thing;
For all unfinish'd was Love's jewell'd ring
Till set with this soft pearl;
The shade that time brought forth I could not see;
How pure, how perfect seem'd the gift to me!

Oh, many a soft old tune
I used to sing unto that deafen'd ear,
And suffer'd not the lightest footsteps near,
Lest she might wake too soon;
And hush'd her brothers' laughter while she lay—
Ah, needless care; I might have let them play.

'Twas long ere I believed
That this one daughter might not speak to me;
Waited and watch'd, God knows how patiently:
How willingly deceived:
Vain Love was long the untiring nurse of Faith
And tended hope until it starved to death.

Oh, if she could but hear
For one short hour, till I her tongue might teach
To call me mother in the broken speech
That thrills the mother's ear!
Alas, those seal'd lips never may be stirr'd
To the deep music of that lovely word.

My heart it sorely tries
To see her kneel with such a reverent air
Beside her brothers at their evening prayer;
Or lift those earnest eyes
To watch our lips, as though our words she knew,—
Then move her own, as she were speaking too.

I've watch'd her looking up
To the bright wonder of a sunset sky,
With such a depth of meaning in her eye,
That I could almost hope
The struggling soul would burst its binding cords,
And the long pent-up thoughts flow forth in words.

The song of the bird and bee,
The chorus of the breezes, streams and groves,
All the grand music to which nature moves,
Are wasted melody
To her: the world of sound a tuneless void;
While even silence hath its charm destroy'd.

Her face is very fair:
Her blue eye beautiful; of finest mould
Her soft white brow, o'er which, in waves of gold,
Ripples her shining hair:
Alas, this lovely temple closed must be
For He who made it keeps the master-key!

Not of all gifts bereft
Even now. How could I say she did not speak?
What real language lights her eye and cheek,
And renders thanks to Him who left
Unto her soul yet open avenues
For joy to enter and for love to use.

And God in love doth give
To her defect a beauty of its own;
And we a deeper tenderness have known
Through that for which we grieve.
Yet shall the seal be melted from her ear,
Yea, and my voice shall reach it, but not here.

When that new sense is given,
What rapture will its first experience be
That never woke to meaner melody
Than the rich songs of heaven—
To hear the full-toned anthem swelling round
While angels teach the ecstasies of sound!

—*Household Words.*

THERE IS A TONGUE IN EVERY LEAF.

There is a tongue in every leaf,
A voice in every rill—
A voice that speaketh everywhere,
In flood and fire, through earth and air;
A tongue that's never still!

'Tis the Great Spirit, wide diffused
Through everything we see,
That with our spirits communeth
Of things mysterious—life and death,
Time and eternity!

I see Him in the blazing sun,
And in the thunder-cloud;
I hear Him in the mighty roar
That rusheth through the forests hoar
When winds are raging loud.

I feel Him in the silent dews,
By grateful earth betray'd;
I feel Him in the gentle showers,
The soft south wind, the breath of flowers,
The sunshine and the shade.

I see Him, hear Him everywhere,
In all things—darkness, light,
Silence, and sound; but, most of all,
When slumber's dusky curtains fall,
In the silent hour of night.

—Anon.

THE BELLS.

I.

Hear the sledges with their bells—
Silver bells!
What a world of merriment their melody foretells!
How they tinkle, tinkle, tinkle,
In the icy air of night,
While the stars that oversprinkle
All the heavens, seem to twinkle
With a crystalline delight;
Keeping time, time, time,
In a sort of Runic rhyme,
To the tintinnabulation that so musically wells
From the bells, bells, bells,
Bells, bells, bells—
From the jingling and the tinkling of the bells.

II.

Hear the mellow wedding-bells—
Golden bells!
What a world of happiness their harmony foretells!
Through the balmy air of night
How they ring out their delight!
From the molten-golden notes,
And all in tune,
What a liquid ditty floats
To the turtle-dove that listens, while she gloats
On the moon!
Oh, from out the sounding cells
What a gush of euphony voluminously wells!
How it swells!
How it dwells—
On the future! how it tells
Of the rapture that impels
To the swinging, and the ringing
Of the bells, bells, bells—
Of the bells, bells, bells, bells,
Bells, bells, bells—
To the rhyming and the chiming of the bells!

III.

Hear the loud alarum bells—
Brazen bells!
What a tale of terror, now, their turbulency tells!
In the startled ear of night
How they scream out their affright!

Too much horrified to speak,
They can only shriek, shriek,
Out of tune,
In a clamorous appealing to the mercy of the fire,
In a mad expostulation with the deaf and frantic fire,
Leaping higher, higher, higher,
With a desperate desire,
And a resolute endeavor,
Now, now to sit, or never,
By the side of the pale-faced moon.
Oh, the bells, bells, bells!
What a tale their terror tells
Of despair!
How they clang, and clash, and roar!
What a horror they outpour
On the bosom of the palpitating air!
Yet the ear it fully knows
By the twanging,
And the clanging,
How the danger ebbs and flows;
Yet the ear distinctly tells,
In the jangling,
And the wrangling,
How the danger sinks and swells,
By the sinking or the swelling in the anger of the bells—
Of the bells—
Of the bells, bells, bells, bells,
Bells, bells, bells—
In the clamor and the clangor of the bells!

IV.

Hear the tolling of the bells—
Iron bells!
What a world of solemn thought their monody compels!
In the silence of the night,
How we shiver with affright
At the melancholy menace of their tone!
For every sound that floats
From the rust within their throats
Is a groan.
And the people—ah, the people—
They that dwell up in the steeple,
All alone,
And who tolling, tolling, tolling,
In that muffled monotone,
Feel a glory in so rolling
On the human heart a stone—

They are neither man nor woman—
They are neither brute nor human—
They are ghouls.
And their king it is who tolls,
And he rolls, rolls, rolls, rolls,
A pæan from the bells!
And his merry bosom swells
With the pæan of the bells!
And he dances and he yells;
Keeping time, time, time,
In a sort of Runic rhyme,
To the pæan of the bells—
Of the bells;
Keeping time, time, time,
In a sort of Runic rhyme,
To the throbbing of the bells—
Of the bells, bells, bells.
To the sobbing of the bells,
Keeping time, time, time,
As he knells, knells, knells,
In a happy Runic rhyme,
To the rolling of the bells—
Of the bells, bells, bells—
To the tolling of the bells,
Of the bells, bells, bells, bells—
Bells, bells, bells,
To the moaning and the groaning of the bells.

—Edgar A. Poe.

THE DEATH OF THE WICKED.

The remembrance of the past, and the view of the present, would be little to the expiring sinner; could he confine himself to these, he would not be so completely miserable; but the thoughts of a futurity convulse him with horror and despair. That futurity, that incomprehensible region of darkness, which he now approaches, conscience his only companion; that futurity, that unknown land from which no traveller has ever returned, where he knows not whom he shall find, nor what awaits him; that futurity, that fathomless abyss, in which his mind is lost and bewildered, and into which he must now plunge, ignorant of his destiny; that futurity, that tomb, that residence of horror, where he must now occupy his place amongst the ashes and the carcasses of his ancestors; that futurity, that incomprehensible

eternity, even the aspect of which he cannot support; that futurity, in a word, that dreadful judgment to which, before the wrath of God, he must now appear, and render account of a life, of which every moment almost has been occupied by crimes. Alas! while he only looked forward to this terrible futurity at a distance, he made an infamous boast of not dreading it; he continually demanded, with a tone of blasphemy and derision, Who is returned from it? He ridiculed the vulgar apprehensions, and piqued himself upon his undaunted courage. But from the moment that the hand of God is upon him—from the moment that death approaches near, that the gates of eternity open to receive him, and that he touches upon that terrible futurity, against which he seemed so fortified—ah! he then becomes either weak, trembling, dissolved in tears, raising up suppliant hands to heaven, or gloomy, silent, agitated, revolving within himself the most dreadful thoughts, and no longer expecting more consolation or mercy from his weak tears and lamentations, than from his frenzies and despair.

Yes, my brethren, this unfortunate wretch, who had always lulled himself in his excesses, always flattered himself that one good moment alone was necessary, one sentiment of compunction before death, to appease the anger of God, despairs then of His clemency. In vain is he told of His eternal mercies; he feels to what a degree he is unworthy of them. In vain the minister of the Church endeavors to soothe his terrors, by opening to him the bosom of His divine mercy: these promises touch him little, because he knows well that the charity of the Church, which never despairs of salvation for its children, cannot, however, alter the awful judgments of the justice of God. In vain is he promised forgiveness of his crimes; a secret and terrible voice resounds from the bottom of his heart, and tells him that there is no salvation for the impious, and that he can have no dependence upon promises which are given to his miseries, rather than to the truth. In vain is he exhorted to apply to those last remedies which the Church offers to the dying; he regards them as desperate reliefs, which are hazarded when hope is over, and which are bestowed more for the consolation of the living, than from any prospect of utility to those who are departing. Servants of Jesus Christ are called in to support him in this last moment; whilst all he is enabled to do, is secretly to envy their lot, and to detest the misery of his own; his friends and relations are assembled round his bed to receive his last sighs, and he turns

away from them his eyes, because he finds still amidst them the remembrance of his crimes. Death, however, approaches: the minister endeavors to support, by prayer, that spark of life which still remains: "Depart, Christian soul," says he: he says not to him, Prince, grandee of the world, depart. During his life, the public monuments were hardly sufficient for the number and pride of his titles. In this last moment they give him that title alone which he had received in baptism; the only one to which he had paid no attention, and the only one which can remain to him for ever. Depart, Christian soul. Alas! he had lived as if the body had formed his only being and treasure; he had even tried to persuade himself that his soul was nothing; that man is only a composition of flesh and blood, and that everything perishes with us. He is now informed that it is his body which is nothing but a morsel of clay, now on the point of crumbling into pieces; and that his only immortal being is that soul, that image of the Divinity, that intelligence, alone capable of knowing and loving its Creator, which now prepares to quit its earthly mansion, and appear before His awful tribunal. Depart, Christian soul. You had looked upon the earth as your country, and it was only a place of pilgrimage, from which you must depart. The Church thought to have announced glad tidings to you, the expiration of your exilement, in announcing the dissolution of your earthly frame. Alas! and it only brings you melancholy and frightful news, and opens the commencement of your miseries and anguish.

Then the expiring sinner, no longer finding in the remembrance of the past, but regrets which overwhelm him—in all which takes place around him, but images which afflict him—in the thoughts of futurity, but horrors which appall him; no longer knowing to whom to have recourse—neither to created beings, who now leave him—nor to the world, which vanishes—nor to men, who cannot save him from death—nor to the just God, whom he looks upon as a declared enemy, and from whom he has no indulgence to expect; a thousand horrors occupy his thoughts—he torments, he agitates himself, in order to fly from death which grasps him, or at least to fly from himself. From his expiring eyes issues something, I know not what, of dark and gloomy, which expresses the fury of his soul; in his anguish he utters words, interrupted by sobs, which are unintelligible, and to which they know not whether repentance or despair gives birth. He is seized with convulsions, which they are ignorant

whether to ascribe to the actual dissolution of his body, or to the soul which feels the approach of its Judge. He deeply sighs; and they know not whether the remembrance of his past crimes, or the despair at quitting life, forces from him such groans of anguish. At last in the midst of these melancholy exertions, his eyes fix, his features change, his countenance becomes disfigured, his livid lips convulsively separate; his whole frame quivers; and, by this last effort, his unfortunate soul tears itself reluctantly from that body of clay, falls into the hands of its God, and finds itself alone at the foot of the awful tribunal.

—MASSILLON.

PLAINS OF ABRAHAM, WITH WOLFE'S MONUMENT.

DEATH OF WOLFE.

(A.D. 1759.)

THE eventful night of the 12th* was clear and calm, with no light but that of the stars. Within two hours before daybreak, thirty boats, crowded with sixteen hundred soldiers, cast off from the vessels, and floated downward, in perfect order, with the current of the ebb-tide. To the boundless joy of the army, Wolfe's malady had abated, and he was able to command in person. His

* September 1759.

ruined health, the gloomy prospects of the siege, and the disaster at Montmorenci, had oppressed him with the deepest melancholy, but never impaired for a moment the promptness of his decisions or the impetuous energy of his action. He sat in the stern of one of the boats, pale and weak, but borne up to a calm height of resolution. Every order had been given, every arrangement made, and it only remained to face the issue. The ebbing tide sufficed to bear the boats along, and nothing broke the silence of the night but the gurgling of the river, and the low voice of Wolfe as he repeated to the officers about him the stanzas of Gray's Elegy in a Country Churchyard, which had recently appeared, and which he had just received from England. Perhaps, as he uttered those strangely appropriate words,—

"The paths of glory lead but to the grave,"—

the shadows of his own approaching fate stole with mournful prophecy across his mind. "Gentlemen," he said, as he closed his recital, "I would rather have written those lines than take Quebec to-morrow."

They reached the landing-place in safety—an indentation in the shore about a league from the city, and now bearing the name of Wolfe's Cove. Here a narrow path led up the face of the heights, and a French guard was posted at the top to defend the pass. By the force of the currents, the foremost boats, including that which carried Wolfe himself, were borne a little below the spot. The general was one of the first on shore. He looked upward at the rugged heights that towered above him in the gloom. "You can try it," he coolly observed to an officer near him; "but I don't think you 'll get up."

At the point where the Highlanders landed, one of their captains, Donald Macdonald, was climbing in advance of his men, when he was challenged by a sentinel. He replied in French, by declaring that he had been sent to relieve the guard, and ordering the soldier to withdraw. Before the latter was undeceived, a crowd of Highlanders were close at hand, while the steeps below were thronged with eager climbers, dragging themselves up by trees, roots, and bushes. The guard turned out, and made a brief though brave resistance. In a moment they were cut to pieces, dispersed, or made prisoners; while men after men came swarming up the height, and quickly formed upon the plains above. Meanwhile the vessels had dropped downward with the current, and anchored opposite the landing-place. The remain-

ing troops were disembarked, and with the dawn of day the whole were brought in safety to the shore.

The sun rose, and from the ramparts of Quebec the astonished people saw the plains of Abraham glittering with arms, and the dark red lines of the English forming in array of battle. . . .

It was nine o'clock, and the adverse armies stood motionless, each gazing on the other. The clouds hung low, and, at intervals, warm, light showers descended, besprinkling both alike. The coppice and corn-fields in front of the British troops were filled with French sharp-shooters, who kept up a distant, spattering fire. Here and there a soldier fell in the ranks, and the gap was filled in silence.

At a little before ten, the British could see that Montcalm was preparing to advance, and in a few moments all his troops appeared in rapid motion. They came on in three divisions, shouting after the manner of their nation, and firing heavily as soon as they came within range. In the British ranks, not a trigger was pulled, not a soldier stirred; and their ominous composure seemed to damp the spirits of the assailants. It was not till the French were within forty yards that the fatal word was given. At once, from end to end of the British line, the muskets rose to the level, as if with the sway of some great machine, and the whole blazed forth at once in one crashing explosion. Like a ship at full career arrested with sudden ruin on a sunken rock, the columns of Montcalm staggered, shivered, and broke before that wasting storm of lead.

The smoke, rolling along the field, for a moment shut out the view; but when the white wreaths were scattered on the wind, a wretched spectacle was disclosed—men and officers tumbled in heaps, columns resolved into a mob, order and obedience gone; and when the British muskets were levelled for a second volley, the masses were seen to cower and shrink with uncontrollable panic.

For a few minutes, the French regulars stood their ground, returning a sharp and not ineffectual fire. But now echoing cheer on cheer, redoubling volley on volley, trampling the dying and the dead, and driving the fugitives in crowds, the British troops advanced, and swept the field before them. The ardor of the men burst all restraint. They broke into a run, and with unsparing slaughter chased the flying multitude to the very gates of Quebec. Foremost of all, the light-footed Highlanders dashed along in furious pursuit, hewing down the Frenchmen with their

broadswords, and slaying many in the very ditch of the fortifications. Never was victory more quick or more decisive.

In the short action and pursuit, the Frenchmen lost fifteen hundred men, killed, wounded, and taken. Of the remainder, some escaped within the city, and others fled across the St. Charles, to rejoin their comrades who had been left to guard the camp. The pursuers were recalled by sound of trumpet; the broken ranks were formed afresh, and the English troops withdrawn beyond reach of the cannon of Quebec. Bougainville, with his detachment, arrived from the upper country, and hovering about their rear, threatened an attack; but when he saw what greeting was prepared for him, he abandoned his purpose, and withdrew. Townshend and Murray, the only general officers who remained unhurt, passed to the head of every regiment in turn, and thanked the soldiers for the bravery they had shown: yet the triumph of the victors was mingled with sadness, as the tidings went from rank to rank that Wolfe had fallen.

In the heat of the action, as he advanced at the head of the grenadiers of Louisburg, a bullet shattered his wrist; but he wrapped his handkerchief about the wound, and showed no sign of pain. A moment more, and a ball pierced his side. Still he pressed forward, waving his sword and cheering his soldiers to the attack, when a third shot lodged deep within his breast. He paused, reeled, and staggering to one side, fell to the earth. Brown, a lieutenant of the grenadiers, Henderson, a volunteer, an officer of artillery, and a private soldier, raised him together in their arms, and bearing him to the rear, laid him softly on the grass. They asked him if he would have a surgeon; but he shook his head, and answered that all was over with him. His eyes closed with the torpor of approaching death, and those around sustained his fainting form. Yet they could not withhold their gaze from the wild turmoil before them, and the charging ranks of their companions rushing through fire and smoke. "See how they run!" one of the officers exclaimed, as the French fled in confusion before the levelled bayonets. "Who run?" demanded Wolfe, opening his eyes like a man aroused from sleep. "The enemy, sir," was the reply; "they give way everywhere." "Then," said the dying general, "tell Colonel Burton to march Webb's regiment down to Charles River, to cut off their retreat from the bridge. Now, God be praised, I will die in peace," he murmured; and turning on his side, he calmly breathed his last.

—PARKMAN.

CHARACTER OF THE EARL OF CHATHAM.

(1708-1778.)

LET us endeavor closely to view and calmly to judge that extraordinary man who at his outset was pitied for losing a cornetcy of horse,* and who within twenty years had made himself the first man in England, and England the first country in the world. He had received from nature a tall and striking figure, aquiline and noble features, and a glance of fire. Lord Waldegrave, after eulogizing the clearness of his style, observes that his eye was as significant as his words. In debates his single look would sometimes disconcert an orator opposed to him. His voice most happily combined sweetness and strength. It was of silvery clearness, and even when it sank to a whisper it was distinctly heard; while its higher tones, like the swell of some majestic organ, could peal and thrill above every other earthly sound.

As to style, Demosthenes was his favorite study among the ancients; among the English, Bolingbroke and Barrow. But perhaps our best clew to Lord Chatham's own mental tasks, more especially in the field of oratory, is afforded by those which he afterwards so successfully enjoined to his favorite son. It may be stated on the authority of the present Lord Stanhope, that Mr. Pitt, being asked to what he principally ascribed the two qualities for which his eloquence was most conspicuous,—namely, the lucid order of his reasonings and the ready choice of his words,—answered, that he believed he owed the former to an early study of the Aristotelian logic, and the latter to his father's practice in making him every day, after reading over to himself some passage in the classics, translate it aloud and continuously into English prose.

Nor was Lord Chatham less solicitous as to his own action and manner, which, according to Horace Walpole, was as studied and as successful as Garrick's; but his care of it extended not only to speeches, but even in society. It is observed by himself in one of his letters, that "behavior, though an external thing, which seems rather to belong to the body than to the mind, is certainly founded in considerable virtues;" and he

* Chatham was deprived of his commission in the army for voting against Sir Robert Walpole, the prime minister, in the House of Commons.

evidently thought very highly of the effect of both dress and address upon mankind. His very infirmities were managed to the best advantage; and it has been said of him that in his hands even his crutch could become a weapon of oratory. This striving for effect had, however, in some respects, an unfavorable influence upon his talents, and, as it appears to me, greatly injured all his written compositions. His private letters bear in general a forced and unnatural appearance; the style of homely texture, but here and there pieced with pompous epithets and swelling phrases. Thus also in his oratory his most elaborate speeches were his worst; and that speech which he delivered on the death of Wolfe, and probably intended as a masterpiece, was universally lamented as a failure.

But when without forethought, or any other preparation than those talents which nature had supplied and education cultivated, Chatham arose—stirred to anger by some sudden subterfuge of corruption or device of tyranny—then was heard an eloquence never surpassed, either in ancient or modern times. It was the highest power of expression ministering to the highest power of thought. Dr. Franklin declares, that in the course of his life he had seen sometimes eloquence without wisdom, and often wisdom without eloquence; in Lord Chatham only had he seen both united. Yet so vivid and impetuous were his bursts of oratory, that they seemed even beyond his own control; instead of his ruling them, they often ruled him, and flashed forth unbidden, and smiting all before them. As in the oracles of old, it appeared to be not he that spake, but the spirit of the deity within. In one debate, after he had just been apprised of an important secret of state, "I must not speak to-night," he whispered to Lord Shelburne, "for when once I am up, every thing that is in my mind comes out." No man could grapple more powerfully with an argument; but he wisely remembered that a taunt is in general of far higher popular effect, nor did he therefore disdain (and in these he stood unrivalled) the keenest personal invectives. His ablest adversaries shrunk before him, crouching and silenced.

But that which gave the brightest lustre, not only to the eloquence of Chatham, but to his character, was his loftiness and nobleness of soul. If ever there has lived a man in modern times to whom the praise of a Roman spirit might be truly applied, that man, beyond all doubt, was William Pitt. He loved power—but only as a patriot should—because he knew

and felt his own energies, and felt also that his country needed them; because he saw the public spirit languishing and the national glory declined; because his whole heart was burning to revive the one and to wreathe fresh laurels round the other. He loved fame, but it was the fame that follows, not the fame that is run after; not the fame that is gained by elbowing and thrusting, and all the little arts that bring forward little men, but the fame that a minister at length will, and must, wring from the very people whose prejudices he despises and whose passions he controls. The ends to which he employed both his power and his fame will best show his object in obtaining them.

I am far, however, from maintaining that Chatham's views were always wise, or his actions always praiseworthy. In several transactions of his life I look in vain for a steady and consistent compass of his course, and the horizon is too often clouded over with party spirit or personal resentments. But his principal defect, as I conceive, was a certain impracticability and waywardness of temper, that on some occasions overmastered his judgment and hurried him along.

Yet, as I think, these frailties of temper should in justice be mainly ascribed to his broken health and to his secluded habits. When in society, Lord Chesterfield assures us that he was "a most agreeable and lively companion, and had such a versatility of wit that he could adapt it to all sorts of conversations." But to such exertions his health and spirits were seldom equal, and he therefore usually confined himself to the intercourse of his family, by whom he was most tenderly beloved, and of a few obsequious friends, who put him under no constraint, who assented to every word he spoke, and never presumed to have an opinion of their own. Such seclusion is the worst of any in its effects upon the temper; but seclusion of all kinds is probably far less favorable to virtue than it is commonly believed. When Whitefield questioned Conrade Mathew, who had been a hermit for forty years amidst the forests of America, as to his inward trials and temptations, the old man quaintly but impressively replied, "Be assured that a single tree, which stands alone, is more exposed to storms than one that grows among the rest."

The most splendid passage in Lord Chatham's public life was certainly the closing one, when, on the 7th of April 1778, wasted by his dire disease, but impelled by an overruling sense of duty, he repaired, for the last time, to the House of Lords, tottering

from weakness, and supported on one side by his son-in-law, Lord Mahon, on the other, by his second son, William, erelong to become, like himself, the saviour of his country. Of such a scene, even the slightest details have interest; and happily they are recorded in the words of an eye-witness. Lord Chatham, we are told, was dressed in black velvet, but swathed up to the knees in flannel. From within his large wig little more was to be seen than his aquiline nose and his penetrating eye. He looked, as he was, a dying man. "Yet never," adds the narrator, "was seen a figure of more dignity; he appeared like a being of a superior species." He rose from his seat with slowness and difficulty, leaning on his crutches and supported by his two relations. He took his hand from his crutch and raised it, lifting his eyes towards heaven, and said, "I thank God that I have been enabled to come here this day—to perform my duty, and to speak on a subject which has so deeply impressed my mind. I am old and infirm—have one foot, more than one foot, in the grave. I am risen from my bed to stand up in the cause of my country—perhaps never again to speak in this House." The reverence, the attention, the stillness of the House were here most affecting: had any one dropped a handkerchief, the noise would have been heard. At first, he spoke in the low and feeble tone of sickness; but as he grew warm, his voice rose in peals as high and harmonious as ever. He gave the whole history of the American war, detailing the measures to which he had objected, and the evil consequences which he had foretold, adding at the close of each period, "And so it proved." He then expressed his indignation at the idea, which he heard had gone forth, of yielding up the sovereignty of America. He called for prompt and vigorous exertion; he rejoiced that he was still alive to lift up his voice against the first dismemberment of this ancient and most noble monarchy.

After him, the Duke of Richmond attempted to show the impossibility of still maintaining the dependence of the colonies. Lord Chatham heard him with attention, and when his grace had concluded, eagerly rose to reply. But this last exertion overcame him, and after repeated attempts to stand firm, he suddenly pressed his hand to his heart, and fell back in convulsions. The Duke of Cumberland, Lord Temple, and other peers caught him in their arms, and bore him to a neighboring apartment, while the lords left in the House immediately adjourned in the utmost confusion and concern. He was removed to Hayes, and lingered

till the 11th of May, when the mighty spirit was finally released from its shattered frame.

Who that reads of this soul-stirring scene—who that has seen it portrayed by that painter whose son has since raised himself by his genius to be a principal light and ornament of the same assembly—who does not feel, that were the choice before him, he would rather live that one triumphant hour of pain and suffering, than through the longest career of thriving and successful selfishness? —Lord Mahon.

INVASION OF THE CARNATIC BY HYDER ALI.

(A.D. 1780.)

When at length Hyder Ali found that he had to do with men who either would sign no convention, or whom no treaty and no signature could bind, and who were the determined enemies of human intercourse itself, he decreed to make the country possessed by these incorrigible and predestinated criminals a memorable example to mankind. He resolved, in the gloomy recesses of a mind capacious of such things, to leave the whole Carnatic an everlasting monument of vengeance; and to put perpetual desolation as a barrier between him and those against whom the faith which holds the moral elements of the world together was no protection. He became at length so confident of his force, so collected in his might, that he made no secret whatsoever of his dreadful resolution. Having terminated his disputes with every enemy and every rival, who buried their mutual animosities in their common detestation against the creditors of the nabob of Arcot, he drew from every quarter whatever a savage ferocity could add to his new rudiments in the arts of destruction; and compounding all the materials of fury, havoc, and desolation into one black cloud, he hung for a while on the declivities of the mountains. Whilst the authors of all these evils were idly and stupidly gazing on this menacing meteor, which blackened all their horizon, it suddenly burst and poured down the whole of its contents upon the plains of the Carnatic. Then ensued a scene of woe, the like of which no eye had seen, no heart conceived, and which no tongue can adequately tell. All the horrors of war before known or heard of, were mercy to that new havoc. A storm of universal fire blasted every field, consumed every house, destroyed every temple. The miserable inhabitants flying from their flaming villages, in part were slaughtered;

others—without regard to sex, to age, to the respect of rank, or sacredness of function—fathers torn from children, husbands from wives, enveloped in a whirlwind of cavalry, and amidst the goading spears of drivers, and the trampling of pursuing horses—were swept into captivity, in an unknown and hostile land. Those who were able to evade this tempest, fled to the walled cities. But escaping from fire, sword, and exile, they fell into the jaws of famine.

The alms of the settlement, in this dreadful exigency, were certainly liberal; and all was done by charity that private charity could do: but it was a people in beggary; it was a nation which stretched out its hands for food. For months together, these creatures of sufferance, whose very excess and luxury in their most plenteous days had fallen short of the allowance of our austerest fasts, silent, patient, resigned, without sedition or disturbance, almost without complaint, perished by a hundred a day in the streets of Madras; every day seventy at least laid their bodies in the streets, or on the glacis of Tanjore, and expired of famine in the granary of India. I was going to awake your justice towards this unhappy part of our fellow-citizens, by bringing before you some of the circumstances of this plague of hunger. Of all the calamities which beset and waylay the life of man, this comes the nearest to our heart, and is that wherein the proudest of us all feels himself to be nothing more than he is: but I find myself unable to manage it with decorum; these details are of a species of horror so nauseous and disgusting—they are so degrading to the sufferers and to the hearers—they are so humiliating to human nature itself, that, on better thoughts, I find it more advisable to throw a pall over this hideous object, and to leave it to your general conceptions.

For eighteen months, without intermission, this destruction raged from the gates of Madras to the gates of Tanjore; and so completely did these masters in their art, Hyder Ali and his more ferocious son, absolve themselves of their impious vow, that when the British armies traversed, as they did, the Carnatic for hundreds of miles in all directions, through the whole line of their march did they not see one man, not one woman, not one child, not one four-footed beast of any description whatever. One dead uniform silence reigned over the whole region. With the inconsiderable exceptions of the narrow vicinage of some few forts, I wish to be understood as speaking literally. I mean to

produce to you more than three witnesses, above all exception, who will support this assertion in its full extent. That hurricane of war passed through every part of the central provinces of the Carnatic. Six or seven districts to the north and to the south (and these not wholly untouched) escaped the general ravage.

The Carnatic is a country not much inferior in extent to England. Figure to yourself, Mr Speaker, the land in whose representative chair you sit; figure to yourself the form and fashion of your sweet and cheerful country from Thames to Trent, north and south, and from the Irish to the German Sea, east and west, emptied and embowelled (may God avert the omen of our crimes!) by so accomplished a desolation. Extend your imagination a little further, and then suppose your ministers taking a survey of this scene of waste and desolation; what would be your thoughts if you should be informed that they were computing how much had been the amount of the excises, how much the customs, how much the land and malt tax, in order that they should charge (take it in the most favorable light) for public service, upon the relics of the satiated vengeance of relentless enemies, the whole of what England had yielded in the most exuberant seasons of peace and abundance? What would you call it? To call it tyranny sublimed into madness, would be too faint an image; yet this very madness is the principle upon which the ministers at your right hand have proceeded in their estimate of the revenues of the Carnatic when they were providing, not supply for the establishments of its protection, but rewards for the authors of its ruin. —BURKE.

REPLY TO THE DUKE OF GRAFTON.

"LORD THURLOW," says Mr Butler, in his 'Reminiscences,' "was at times superlatively great. It was the good fortune of the reminiscent to hear his celebrated reply to the Duke of Grafton during the inquiry into Lord Sandwich's administration of Greenwich Hospital. His Grace's action and delivery when he addressed the House were singularly dignified and graceful; but his matter was not equal to his manner. He reproached Lord Thurlow with his plebeian extraction and his recent admission into the Peerage: particular circumstances caused Lord Thurlow's reply to make a deep impression on the reminiscent. His

Lordship had spoken too often, and began to be heard with a civil, but visible impatience. Under these circumstances he was attacked in the manner we have mentioned. He rose from the woolsack, and advanced slowly to the place from which the Chancellor generally addresses the House; then, fixing on the Duke the look of Jove when he grasped the thunder,—

"'I am amazed,' he said, in a loud tone of voice, 'at the attack the noble Duke has made on me. Yes, my Lords,' considerably raising his voice, 'I am amazed at his Grace's speech. The noble Duke cannot look before him, behind him, or on either side of him, without seeing some noble Peer who owes his seat in this House to successful exertions in the profession to which I belong. Does he not feel that it is as honorable to owe it to these, as to being the accident of an accident? To all these noble Lords the language of the noble Duke is as applicable and as insulting as it is to myself. But I don't fear to meet it single and alone. No one venerates the Peerage more than I do; but, my Lords, I must say, that the Peerage solicited me, not I the Peerage. Nay, more, I can say, and will say, that as a Peer of Parliament, as Speaker of this right honorable House, as Keeper of the Great Seal, as Guardian of his Majesty's Conscience, as Lord High Chancellor of England; nay, even in that character alone in which the noble Duke would think it an affront to be considered —as a man—I am at this moment as respectable—I beg leave to add, I am at this moment as much respected—as the proudest Peer I now look down upon.'"

SPEECH AGAINST WARREN HASTINGS.

(June 3, 1788.)

The counsel, in recommending attention to the public in preference to the private letters, had remarked, in particular, that one should not be taken as evidence, because it was manifestly and abstractedly private, as it contained in one part the anxieties of Mr. Middleton for the illness of his son. This was a singular argument indeed; and the circumstance, in my mind, merited strict observation, though not in the view in which it was placed by the counsel. It went to show that some at least of those concerned in these transactions felt the force of those ties which their efforts were directed to tear asunder; that those who could ridicule the respective attachment of a mother and a son—who

would prohibit the reverence of the son to the mother who had given him life—who could deny to *maternal debility* the protection which *filial tenderness* should afford, were yet sensible of the *straining* of those *chords* by which they were connected. There was something connected with this transaction so wretchedly horrible, and so vilely loathsome, as to excite the most contemptible disgust. If it were not a part of my duty, it would be superfluous to speak of the sacredness of the ties which those aliens to feeling, those apostates to humanity had thus divided. In such an assembly as that which I have the honor of addressing, there is not an eye but must dart reproof at this conduct;—not a heart but must anticipate its condemnation. FILIAL PIETY! It is the primal bond of society—it is that instinctive principle, which, panting for its proper good, soothes, unbidden, each sense and sensibility of man!—it now quivers on every lip!—it now beams from every eye!—it is an emanation of that gratitude, which, softening under the sense of recollected good, is eager to own the vast countless debt it ne'er, alas! can pay, for so many long years of unceasing solicitudes, honorable self-denials, life-preserving cares!—it is that part of our practice, where duty drops its awe!—where reverence refines into love!—it asks no aid of memory!—it needs not the deductions of reason!—pre-existing, paramount over all, whether law or human rule, few arguments can increase and none can diminish it!—it is the sacrament of our nature!—not only the duty, but the indulgence of man—it is his first great privilege—it is amongst his last most endearing delights!—it causes the bosom to glow with reverberated love!—it requites the visitations of nature, and returns the blessings that have been received!—it fires emotion into vital principle—it renders habituated instinct into a master-passion—sways all the sweetest energies of man—hangs over each vicissitude of all that must pass away—aids the melancholy virtues in their last sad tasks of life, to cheer the languors of decrepitude and age—explores the thought—elucidates the aching eye—and breathes sweet consolation even in the awful moments of dissolution! . . . . . .

O Faith! O Justice! I conjure you by your sacred names to depart for a moment from this place, though it be your peculiar residence; nor hear your names profaned by such a sacrilegious combination, as that which I am now compelled to repeat!—where all the fair forms of nature and art, truth and peace, policy and honor, shrunk back aghast from the deleterious shade! where

all existences, nefarious and vile, had sway;—where, amidst the black agents on one side, and Middleton with Impey on the other, the toughest head, the most unfeeling heart! the great figure of the piece, characteristic in his place, stood aloof and independent from the puny profligacy in his train!—but far from idle and inactive,—turning a malignant eye on all mischief that awaited him!—the multiplied apparatus of temporizing expedients, and intimidating instruments! now cringing on his prey, and fawning on his vengeance!—now quickening the limping pace of craft, and forcing every stand that retiring nature can make in the heart! violating the attachments and the decorums of life! sacrificing every emotion of tenderness and honor! and flagitiously levelling all the distinctions of national characteristics! with a long catalogue of crimes and aggravations, beyond the reach of thought, for human malignity to perpetrate, or human vengeance to punish! —SHERIDAN.

MARIE ANTOINETTE, QUEEN OF FRANCE.

(A.D. 1755–1793.)

IT is now sixteen or seventeen years since I saw the queen of France, then the dauphiness, at Versailles; and surely never lighted on this orb, which she hardly seemed to touch, a more delightful vision. I saw her just above the horizon, decorating and cheering the elevated sphere she just began to move in—glittering like the morning star, full of life, and splendor, and joy. Oh, what a revolution! and what a heart must I have to contemplate without emotion that elevation and that fall! Little did I dream, when she added titles of veneration to that enthusiastic, distant, respectful love, that she should ever be obliged to carry the sharp antidote against disgrace concealed in that bosom; little did I dream that I should have lived to see such disasters fallen upon her in a nation of gallant men, in a nation of men of honor and of cavaliers. I thought ten thousand swords must have leaped from their scabbards to avenge even a look that threatened her with insult. But the age of chivalry is gone. That of sophisters, economists, and calculators has succeeded; and the glory of Europe is extinguished for ever. Never, never more shall we behold that generous loyalty to rank and sex, that proud submission, that dignified obedience, that subordination of the heart, which kept alive, even in servitude itself,

the spirit of an exalted freedom. The unbought grace of life, the cheap defence of nations, the nurse of manly sentiment and heroic enterprise is gone! It is gone, that sensibility of principle, that chastity of honor, which felt a stain like a wound, which inspired courage whilst it mitigated ferocity, which ennobled whatever it touched, and under which vice itself lost half its evil by losing all its grossness. —BURKE.

DEATH OF NELSON.

DEPARTURE AND DEATH OF NELSON.

(A.D. 1805.)

NELSON having despatched his business at Portsmouth, endeavored to elude the populace by taking a byway to the beach, but a crowd collected in his train, pressing forward to obtain a sight of his face: many were in tears, and many knelt down before him, and blessed him as he passed. England has had many heroes, but never one who so entirely possessed the love of his fellow-countrymen as Nelson. All men knew that his heart was as humane as it was fearless; that there was not in his nature the slightest alloy of selfishness or cupidity; but that, with perfect and entire devotion, he served his country with all his heart, and with all his soul, and with all his strength; and, therefore, they loved him as truly and as fervently as he loved

England. They pressed upon the parapet to gaze after him when his barge pushed off, and he returned their cheers by waving his hat. The sentinels who endeavored to prevent them from trespassing upon this ground, were wedged among the crowd; and an officer who, not very prudently upon such an occasion, ordered them to drive the people down with their bayonets, was compelled speedily to retreat; for the people would not be debarred from gazing till the last moment upon the hero—the darling hero of England! . . . It had been part of Nelson's prayer, that the British fleet might be distinguished by humanity in the victory which he expected. Setting an example himself, he twice gave orders to cease firing on the *Redoubtable*, supposing that she had struck, because her guns were silent; for, as she carried no flag, there was no means of instantly ascertaining the fact. From this ship, which he had thus twice spared, he received his death. A ball fired from her mizen-top, which, in the then situation of the two vessels, was not more than fifteen yards from that part of the deck where he was standing, struck the epaulet on his left shoulder, about a quarter after one, just in the heat of action. He fell upon his face, on the spot which was covered with his poor secretary's blood. Hardy, who was a few steps from him, turning round, saw three men raising him up. "They have done for me at last, Hardy," said he. "I hope not," cried Hardy. "Yes," he replied, "my backbone is shot through." Yet even now, not for a moment losing his presence of mind, he observed, as they were carrying him down the ladder, that the tiller ropes, which had been shot away, were not yet replaced, and ordered that new ones should be rove immediately: then, that he might not be seen by the crew, he took out his handkerchief, and covered his face and his stars. Had he but concealed these badges of honor from the enemy, England, perhaps, would not have had cause to receive with sorrow the news of the battle of Trafalgar. The cockpit was crowded with wounded and dying men, over whose bodies he was with some difficulty conveyed, and laid upon a pallet in the midshipmen's berth. It was soon perceived, upon examination, that the wound was mortal. This, however, was concealed from all except Captain Hardy, the chaplain, and the medical attendants. He himself being certain, from the sensation in his back, and the gush of blood he felt momently within his breast, that no human care could avail him, insisted that the surgeon should leave him, and attend to those to whom

he might be useful; "for," said he, "you can do nothing for me." All that could be done was to fan him with paper, and frequently to give him lemonade to alleviate his intense thirst. He was in great pain, and expressed much anxiety for the event of the action, which now began to declare itself. As often as a ship struck, the crew of the *Victory* hurrahed, and at every hurrah, a visible expression of joy gleamed in the eyes, and marked the countenance of the dying hero. But he became impatient to see Hardy; and as that officer, though often sent for, could not leave the deck, Nelson feared that some fatal cause prevented him, and repeatedly cried, "Will no one bring Hardy to me? he must be killed! he is surely dead!" An hour and ten minutes elapsed from the time when Nelson received his wound, before Hardy could come to him. They shook hands in silence, Hardy in vain struggling to suppress the feelings of that most painful and yet sublime moment. "Well, Hardy," said Nelson, "how goes the day with us?" "Very well," replied Hardy; "ten ships have struck, but five of the van have tacked, and show an intention to bear down upon the *Victory*. I have called two or three of our fresh ships round, and have no doubt of giving them a drubbing." "I hope," said Nelson, "none of our ships have struck." Hardy answered, "There is no fear of that." Then, and not till then, Nelson spoke of himself. "I am a dead man, Hardy," said he; "I am going fast; it will be all over with me soon. Come nearer to me. Let my dear Lady Hamilton have my hair, and all other things belonging to me." Hardy observed, that he hoped Mr Beatty could yet hold out some prospect of life. "Oh no," he replied; "it is impossible. My back is shot through. Beatty will tell you so." Hardy then once more shook hands with him, and with a heart almost bursting, hastened upon deck.

By this time all feeling below the breast was gone, and Nelson, having made the surgeon ascertain this, said to him: "You know I am gone. I know it. I feel something rising in my breast," putting his hand on his left side, "which tells me so." And upon Beatty's inquiring whether his pain was very great, he replied, So great that he wished he was dead. "Yet," said he, in a lower voice, "one would like to live a little longer too!" And after a few minutes, in the same undertone, he added: "What would become of poor Lady Hamilton if she knew my situation?" Next to his country she occupied his thoughts. Captain Hardy, some fifty minutes after he had left the cockpit,

returned, and again taking the hand of his dying friend and commander, congratulated him on having gained a complete victory. How many of the enemy were taken he did not know, as it was impossible to perceive them distinctly, but fourteen or fifteen at least. "That 's well," cried Nelson; "but I bargained for twenty." And then, in a stronger voice, he said, "Anchor, Hardy, anchor." Hardy, upon this, hinted that Admiral Collingwood would take upon himself the direction of affairs. "Not while I live, Hardy," said the dying Nelson, ineffectually endeavoring to raise himself from the bed: "do you anchor." His previous orders for preparing to anchor had shown how clearly he foresaw the necessity of this. Presently calling Hardy back, he said to him in a low voice, "Don't throw me overboard;" and he desired that he might be buried by his parents, unless it should please the king to order otherwise. Then reverting to private feelings: "Take care of my dear Lady Hamilton, Hardy; take care of poor Lady Hamilton. Kiss me, Hardy," said he. Hardy knelt down and kissed his cheek; and Nelson said, "Now I am satisfied. Thank God, I have done my duty!" Hardy stood over him in silence for a moment or two, then knelt again and kissed his forehead. "Who is that?" said Nelson; and being informed, he replied, "God bless you, Hardy." And Hardy then left him for ever. Nelson now desired to be turned upon his right side, and said, "I wish I had not left the deck, for I shall soon be gone." Death was, indeed, rapidly approaching. He said to the chaplain, "Doctor, I have *not* been a *great* sinner;" and after a short pause, "Remember that I leave Lady Hamilton and my daughter Horatia as a legacy to my country." His articulation now became difficult; but he was distinctly heard to say, "Thank God, I have done my duty!" These words he repeatedly pronounced, and they were the last words which he uttered. He expired at thirty minutes after four, three hours and a quarter after he had received his wound.

The death of Nelson was felt in England as something more than a public calamity; men started at the intelligence, and turned pale, as if they had heard of the loss of a near friend. An object of our admiration and affection, of our pride and of our hopes, was suddenly taken from us; and it seemed as if we had never till then known how deeply we loved and reverenced him. What the country had lost in its great naval hero—the greatest of our own and of all former times—was scarcely taken into the account of grief. So perfectly, indeed, had he performed his part,

that the maritime war, after the battle of Trafalgar, was considered at an end. The fleets of the enemy were not merely defeated, but destroyed; new navies must be built, and a new race of seamen reared for them, before the possibility of their invading our shores could again be contemplated. It was not, therefore, from any selfish reflection upon the magnitude of our loss that we mourned for him; the general sorrow was of a higher character. The people of England grieved that funeral ceremonies, and public monuments, and posthumous rewards, were all which they could now bestow upon him whom the king, the legislature, and the nation would have alike delighted to honor, whom every tongue would have blessed, whose presence in every village through which he might have passed would have wakened the church bells, have given schoolboys a holiday, have drawn children from their sports to gaze upon him, and "old men from the chimney-corner" to look upon Nelson ere they died. The victory of Trafalgar was celebrated, indeed, with the usual forms of rejoicing, but they were without joy; for such already was the glory of the British navy, through Nelson's surpassing genius, that it scarcely seemed to receive any addition from the most signal victory that ever was achieved upon the seas; and the destruction of this mighty fleet, by which all the maritime schemes of France were totally frustrated, hardly appeared to add to our security or strength; for while Nelson was living to watch the combined squadrons of the enemy, we felt ourselves as secure as now, when they were no longer in existence.

There was reason to suppose, from the appearances upon opening his body, that in the course of nature he might have attained, like his father, to a good old age. Yet he cannot be said to have fallen prematurely whose work was done; nor ought he to be lamented who died so full of honors, and at the height of human fame. The most triumphant death is that of the martyr; the most awful, that of the martyred patriot; the most splendid, that of the hero in the hour of victory; and if the chariot and the horses of fire had been vouchsafed for Nelson's translation, he could scarcely have departed in a brighter blaze of glory. He has left us, not indeed his mantle of inspiration, but a name and an example which are at this moment inspiring thousands of the youth of England—a name which is our pride, and an example which will continue to be our shield and our strength. Thus it is that the spirits of the great and the wise continue to live and to act after them. —SOUTHEY.

THE OTHER PHYSICAL SCIENCES.

THE two groups which we have thus far considered are those known as the Natural and Mathematical Sciences. These, together with the group that is now to be introduced to your notice, make up the large class of the Physical Sciences, so called —as you are, no doubt, aware—from a Greek word signifying *nature*, since the subjects of which they treat are natural objects and powers. This large family of the Physical Sciences exhausts the whole wide domain of nature, viewed not only as a collection of dull, inert matter, but as a scene of perpetual activity. We have already seen that nothing in the world consists only of dead, powerless matter; that to everything there is applied the mysterious element termed force; and that by the union of these two great principles, in an infinite variety of form, is made up the vast empire of nature. The force with which we have hitherto had to deal in connexion with the Mathematical Sciences is, to a great extent, *homogeneous*, or of the same nature, whether exerted in the attraction of bodies to the earth, the raising of fluids, the diffusion of gases, the motions of the heavenly bodies, or the transmission of light and sound. But very different, in many respects, are the forces which we are now to consider; powers that the mathematician can make little of, and which the natural historian and the chemist are not sorry to erect into separate sciences. These powers, the study of which completes the circle of the Physical Sciences—powers mysterious in their origin, remarkable in their effects, and but recently examined with any fitting amount of attention—are *life*, *heat*, *electricity*, and *magnetism*.

Let us revert for a moment to the subjects of our first lesson on the sciences. You will remember that the objects composing the material world, or the empire of nature, are, as included under the sciences of geology, meteorology, botany, and zoology, the earth and its constituent parts, as rock masses, soils, and minerals; things in the air, as its component gases, snow and hail; and finally, plants and animals. Here, then, are four classes, the first two being essentially different from the two last. The one element which, by its presence or absence, constitutes the distinction between them is *life*. We separate the classes thus formed by calling the former, or those which constitute the subject-matter of botany and zoology, *organized bodies*, as being

composed of different parts or *organs*, fulfilling various functions or duties by means of the vital principle. The objects of geological and meteorological science we call *unorganized*, as consisting of similar parts, and being thus destitute of organs, and, consequently, of functions to be performed. The two great functions common to all organized bodies are those of *nutrition* and *reproduction*. Nutrition is the process by which food or nourishment, being taken into the organized body, forms substances similar to it, and thus increases the growth of the body, or supplies what is lost by wear and tear of the system. Reproduction, on the other hand, is the process by which the adult plant or animal produces young plants or animals of the same kind as itself, thus keeping up a perpetual round of life, from year to year, and from generation to generation. In addition to these functions, animals, as a rule, possess the faculties of sensation or feeling, of self-determined motion, and, to a certain extent, of intelligence. Thus there arises a distinction between animal and vegetable life, which is expressed by the use of the terms *animate* and *inanimate*, the former being applied to the animal, and the latter to the vegetable creation. The science that treats of this wonderful phenomenon, *life*—of the mysterious power by which beings live and grow and reproduce themselves—is called Physiology. The word physiology is Greek, and means simply *a discourse about nature*. You will perceive, therefore, that it is too wide a term altogether to be applied to so limited a field; a much more appropriate title for the science would be Biology, or *a discourse about life*. It is divided into two branches, animal and vegetable physiology, which should be studied in connexion with zoology and botany, their kindred sciences, in order that they may mutually illustrate one another. A comparison of organized bodies with each other, exhibiting all the steps by which we ascend from the so-called red snow of the Arctic regions, a lichen consisting of a single cell, to the giant oak, and from the minute animalcule to the king of beasts, is called Comparative Physiology.

The application of this science to human life, embracing a study of man's organism, and of the diseases to which it is subject, lies at the foundation of the art of medicine.

We have now to consider a power not confined to organized bodies, but universally diffused throughout nature; this power is Heat. No substance is destitute of it; plants and animals, stones and metals, air, water, and even ice, possess heat. Every

day the sun sends down floods of warmth upon our earth; it is evolved by the nourishment we take into our system; and in chemical union and decomposition it is always present. Friction is a fruitful agent of heat. Sir Humphrey Davy, when a student, first discovered that by rubbing together two pieces of ice, heat can be evolved from them. The Kaffirs of South Africa kindle a fire by smartly twisting a pointed stick, held vertically, in the round hole scooped out in another piece of wood placed in a horizontal position; and the phenomenon exhibited by the striking together of a flint and steel, or two fire-stones, is well known to every schoolboy. You must have observed this wonderful power in a thousand different forms; in the cheerful fire, and in the terrible conflagration; in the steaming of the tea-kettle, and the speed of the railway train; in warm clothing, and the summer sun; in the effects of the burning glass, and in the redhot bar on the blacksmith's anvil. Then, again, you have read of volcanoes and boiling springs, giving evidence of the great fires that are smouldering far beneath our feet in the centre of the globe. What is this remarkable element, the good servant and the bad master? Is it a substance like earth, and air, and water, that were classed in olden times, before chemistry enlightened the world, as its brother elements; or is it only a force, a power to act upon and alter the conditions of matter? To answer this question, and numberless as interesting ones concerning heat, you must refer to chemical works, and others written expressly upon the new science of Heat, or, as it is sometimes called, from a Greek word which means *pertaining to heat*, Thermotics.

Generally treated of in connexion with heat, is a subtle invisible agent, capable of producing the most marvellous effects. It annihilates time and space, bearing messages to a distance of many hundred miles in a few moments of time, like the fabled *genii* of old. It runs over continents, bridges seas, and now unites the old and new worlds in its own quiet, mysterious way. This strange power is greatly diffused in the world. We see it in the lightning that, in stormy weather, flashes across the sky, or in warm summer evenings spreads its fitful light over the horizon. The Aurora Borealis, or Northern Lights, and the bright artificial sparks from what is termed *an electric battery*, are exhibitions of this same power. A familiar instance of it is seen in the thin streaks of light that appear when the hair of a black cat is rubbed

the wrong way in the dark. The power of this remarkable agent is twofold—it attracts and repels. Thus, a stick of sealing-wax, rubbed smartly upon a piece of silk or the coat sleeve, will attract a piece of glass treated in a similar manner, but will repel another piece of wax. With certain substances it seems to agree, and can be conveyed through or over them without any part of it being lost, while it is, so to speak, absorbed by others. The former are called *good* conductors, among the number of which is iron, the metal of which lightning rods are made. Seven animals, all of the fish tribe, possess this power in a remarkable degree; these are three species of the torpedo, the electric eel, the Indian sword-fish, a kind of globe-fish, and another of the salmon family called silurus. It is not, however, confined to these creatures, but resides in a much smaller degree in most animals and plants, being a regular attendant of heat, under which it is generally classified. This hidden power, this mysterious agent, is called *Electricity*, from the Greek word *electron*, meaning *amber*, because it was from the friction of a piece of amber that its existence was first discovered. The science of Electricity is comparatively new, and has no regular name assigned to it, although, being a great power in nature, it is frequently, like the several departments of mechanics, divided into electro-statics and electro-dynamics.

The last great power in the natural world, with which we shall close our review of the Physical Sciences, is that of Magnetism. No doubt, you have often observed that extraordinary power of attraction by which a common horse-shoe magnet will draw towards it any small article of iron brought within the sphere of its influence. You have also heard of, or seen, the mariner's compass, with its little needle steadily pointing to the North Pole. Many fabulous stories have been told concerning this power. One well known to juvenile readers, is that of the mountain of loadstone, situated on an island in the midst of the sea, which attracted to itself all the nails and iron work about ships sailing near it, and thus caused them to fall to pieces, and their crews to perish. You may not indeed hear of anything so incredible as this, but you will meet with innumerable interesting facts and items of information by studying the science of Magnetism.

Such are the four remaining Physical Sciences, completing, as it were, the survey of the natural world. Within the circle of

the natural, the mathematical, and the sciences just described, is comprehended all that man has hitherto discovered and recorded concerning the universe, viewed as a mere collection of substances and forces. In future lessons we shall take into consideration another element, namely, the spiritual nature of man, introducing us into a world as wonderful, and no less interesting, than that which the physical sciences unfold before us.

The Physical Sciences—

Geology.	Chemistry.	Acoustics.
Botany.	Mechanics.	Physiology.
Zoology.	Astronomy.	Science of Heat.
Meteorology.	Optics.	Science of Electricity.

Science of Magnetism.

—CAMPBELL'S *Fifth Reader.*

CONDUCTION AND RADIATION.

SECT. 1. If you hold a stone in your hand above the earth's surface, you feel the weight of the stone, and you know that this feeling is produced by the attraction of the earth for the stone. When you let the stone loose, it falls, and thus the mutual attraction of the earth and stone is satisfied. If you were to examine the stone properly after its fall, you would find that it had become a little *warmed* by its concussion against the earth. Now, not only is heat developed when two large masses of matter come thus into collision, but we may descend to the smallest particles of matter—to what chemists call *atoms*—and find the same to be the case. Iron, for instance, has an attraction for oxygen: they unite together and form iron rust; but no particle of rust is formed, no single attraction between an atom of iron and an atom of oxygen is satisfied, without the development of heat. The tallow of a candle, and the gas we burn in our streets, are composed of carbon and hydrogen, both of which have a strong attraction for oxygen. The carbon unites with this oxygen, and forms carbonic acid gas; the hydrogen unites with the same substance, and forms water; here the satisfaction of each attraction develops heat, which finally attains the intensity which we observe in flame. A process exactly similar goes on in our bodies. We

eat butter and fat, which are composed chiefly of carbon and hydrogen, and we inhale oxygen from the air, which unites in our bodies with these two elements, and thus furnishes heat to the body. It is to all intents and purposes a slow combustion which goes on within us. The formation of iron rust is also a case of slow combustion; and if the combustion be rendered sufficiently intense, by igniting the metal in pure oxygen, a bar of iron may be burnt up as effectually as a bar of wood.

It is to the combustion going on within us, and not to the clothes we wear, that the warmth of our bodies is due. What useful purposes, then, do our clothes serve? They are made of materials which resist the passage of the heat from our bodies to the air, and thus prevent the incessant loss of heat. They have no power to confer heat, but they have the power to check its expenditure. Different kinds of clothes possess very different powers in this respect, some allowing the heat to travel through them more readily than others; and this leads me to consider for a few moments what is called the *conduction* of heat.

If you thrust one end of a cold poker into a fire, that end becomes warmed, and the heat is propagated from particle to particle through the poker, until, if the poker be not too long, the end most distant from the fire becomes also sensibly warmed. This mode of propagation is called *conduction*, and the power of conduction is possessed in very different degrees by different bodies. The metals are the best conductors, but they differ very much among themselves. The following is the order in which they stand, commencing with the best conductor, which is silver:—Silver, copper, gold, brass, tin, iron, steel, lead, platinum, bismuth.

Stones and crystals also differ from each other in their power of conducting heat; rock-crystal, for example, conducts heat much better than selenite. Some bodies possess different powers of conduction in different directions; most crystals possess this power. Wood conducts heat best along the fibre; next best across the rings that mark the growth of the tree; and worst, in the direction of these rings. Wool is an exceedingly bad conductor, and hence its value as a material for clothing; and hence, also, the reason why, if you place your hand upon a piece of cloth and a piece of metal on a cold day, the metal will *feel*

much colder than the cloth, though both of them may really be of the same temperature. Cold consists in the abstraction of heat from the body; and the metal being a good conductor, does this far more speedily than the cloth, and hence feels colder.

Sect. 2. A heated body has also the power of sending out *rays* of heat, as a luminous body darts out rays of light. In the case of conduction, we regarded the propagation of heat from particle to particle within the mass of a body; in the present case, we have to deal with the heat shot out into space from the *surface* of the body. Some substances possess the power of radiation in a far greater degree than others; the metals, though they are the *best* conductors, are the *worst* radiators. This is particularly the case when they are polished. If a polished silver vessel, and a glass vessel of the same size, be filled with hot water and placed in calm air, it will be found that the water in the glass vessel cools much more quickly than that in the silver vessel; and the reason is, that the radiation from the glass is far more copious than from the silver. Nay, you can go further, and, by coating your silver vessel with flannel, you may actually hasten its cooling, flannel is so much better a radiator than silver.

Now, pay attention to what I am about to say to you. All bodies radiate heat; even *ice* radiates heat. When the quantity of heat received by a body is greater than what it gives out, it becomes warmed; when less, it becomes cooled. If you stand before a stove, the stove gives heat to you, and you give heat to the stove; but the quantity you receive being greater than what you give, you are warmed. In like manner, when you stand before a block of ice, you receive heat from the ice, and you give heat to the ice in return; but the quantity you give is much greater than that which you receive, and hence you are chilled. In this way the heat of bodies is distributed by a process of *exchanges.*

This process is productive of very wonderful effects in nature; but before I refer to these, let me make my way clear. The air around us always contains a quantity of water in the form of vapor. You cannot see this vapor, but it nevertheless exists. If you take a perfectly dry glass, and pour into it a quantity of ice-cold water, you will find the outside of the glass become dim; this dimness being caused by the condensation to water, upon the

surface of the cold glass, of the vapor which was previously invisible in the air. The sudden opening of a ball-room window in a northern climate has been known to cause *snow* to fall in the room, through the condensation and freezing of the vapor which, in the hot air of the room, was invisible. Thus you see when the air is sufficiently cooled, it deposits the vapor it contains, first in the form of water, and, if the cold be sufficient, even in the form of ice. —PROFESSOR TYNDALL.

SPEECH AGAINST NAPOLEON.

(MAY 25, 1815.)

THE proposition that we should not interfere with the government of other nations is true; but true with qualifications. If the government of any other country contains an insurrectionary principle, as France did, when she offered to aid the insurrection of her neighbors, your interference is warranted; if the government of another country contains the principle of universal empire, as France did, and promulgated, your interference is justifiable. Gentlemen may call this internal government; but I call this conspiracy. If the government of another country maintains a predatory army, such as Bonaparte's, with a view to hostility and conquest, your interference is just. He may call this internal government; but I call this a preparation for war. No doubt he will accompany this with offers of peace; but such offers of peace are nothing more than one of the arts of war, attended, most assuredly, by charging on you the odium of a long and protracted contest, and with much commonplace, and many good saws and sayings of the miseries of bloodshed, and the savings and good husbandry of peace, and the comforts of a quiet life. But if you listen to this you will be much deceived; not only deceived, but you will be beaten. Again, if the government of another country covers more ground in Europe, and destroys the balance of power, so as to threaten the independence of other nations, this is a cause of your interference. Such was the principle upon which we acted in the best times: such was the principle of the Grand Alliance; such was the Triple Alliance, and such the Quadruple; and by such principles has Europe not only been regulated, but protected. If a foreign government does any of those acts I have mentioned, we have a

cause of war; but if a foreign power does all of them,—forms a conspiracy for universal empire, keeps up an army for that purpose, employs that army to overturn the balance of power, and attempts the conquest of Europe,—attempts, do I say? in a great degree achieves it (for what else was Bonaparte's dominion before the battle of Leipsic?)—and then receives an overthrow; owes its deliverance to treaties which give that power its life, and these countries their security (for what did you get from France but security?)—if this power, I say, avails itself of the conditions in the treaties, which give it colonies, prisoners, and deliverance, and breaks those conditions which give you security, and resumes the same situation which renders this power capable of repeating the same atrocity,—has England, or has she not, a right of war?

Having considered the two questions—that of ability, and that of right—and having shown that you are justified on either consideration to go to war, let me now suppose that you treat for peace. First, you will have peace upon a war establishment, and then a war without your present allies. It is not certain that you will have any of them, but it is certain that you will not have the same combination, while Bonaparte increases his power by confirmation of his title, and by further preparation; so that you will have a bad peace and a bad war. Were I disposed to treat for peace, I would not agree to the amendment, because it disperses your allies and strengthens your enemy, and says to both, We will quit our alliance to confirm Napoleon on the throne of France, that he may hereafter more advantageously fight us, as he did before, for the throne of England.

Gentlemen set forth the pretensions of Bonaparte. Gentlemen say that he has given liberty to the press; he has given liberty to publication, to be afterwards tried and punished according to the present constitution of France, as a military chief pleases—that is to say, he has given liberty to the French to hang themselves. Gentlemen say, he has in his dominions abolished the slave-trade. I am unwilling to deny him praise for such an act; but if we praise him for giving liberty to the African, let us not assist him in imposing slavery on the European. Gentlemen say, will you make war upon character? But the question is, Will you trust a government without one? What will you do if you are conquered, say gentlemen? I answer, The very thing you must do if you treat—abandon the Low Countries. But the question is, In which case are you most

likely to be conquered—with allies or without them? Either you must abandon the Low Countries, or you must preserve them by arms, for Bonaparte will not be withheld by treaty. If you abandon them, you will lose your situation on the globe; and instead of being a medium of communication and commerce between the new and the old, you will become an anxious station between two fires—the Continent of America, rendered hostile by the intrigues of France, and the Continent of Europe, possessed by her arms. It then remains for you to determine, if you do not abandon the Low Countries, in what way you mean to defend them—alone or with allies.

Gentlemen complain of the allies, and say, they have partitioned such a country, and transferred such a country, and seized on such a country. What! will they quarrel with their ally, who has possessed himself of a part of Saxony, and shake hands with Bonaparte, who proposes to take possession of England? If a prince takes Venice, we are indignant; but if he seizes on a great part of Europe, and stands covered with the blood of millions, and the spoils of half mankind, our indignation ceases, vice becomes gigantic, conquers the understanding, and mankind begin by wonder, and conclude by worship. The character of Bonaparte is admirably calculated for this effect: he invests himself with much theatrical grandeur; he is a great actor in the tragedy of his own government; the fire of his genius precipitates on universal empire, certain to destroy his neighbors or himself; better formed to acquire empire than to keep it, he is a hero and a calamity, formed to punish France and to perplex Europe.

Gentlemen speak of the Bourbon family. I have already said we should not force the Bourbon upon France; but we owe it to departed—I would rather say to interrupted—greatness to observe that the House of Bourbon was not tyrannical. Under her, everything except the administration of the country was open to animadversion; every subject was open to discussion—philosophical, ecclesiastical, and political; so that learning, and arts, and sciences made progress. Even England consented to borrow not a little from the temperate meridian of that government. Her court stood controlled by opinion, limited by principles of honor, and softened by the influence of manners; and, on the whole, there was an amenity in the condition of France which rendered the French an amiable, an enlightened, a gallant, and accomplished race. Over this gallant race you see imposed an

Oriental despotism. Their present court—Bonaparte's court—has gotten the idiom of the East as well as her constitution; a fantastic and barbaric expression; an unreality which leaves in the shade the modesty of truth, and states nothing as it is, and everything as it is not. The attitude is affected, the taste is corrupted, and the intellect perverted. Do you wish to confirm this military tyranny in the heart of Europe—a tyranny founded on the triumph of the army over the principles of civil government, tending to universalize throughout Europe the domination of the sword, and to reduce to paper and parchment Magna Charta and all our civil constitutions? Should you do anything so monstrous as to leave your allies in order to confirm such a system; should you forget your name, forget your ancestors, and the inheritance they have left you of morality and renown; should you astonish Europe by quitting your allies, to render immortal such a composition, would not the nations exclaim, "You have very providently watched over our interests, and very generously have you contributed to our service, and do you falter now? In vain have you stopped in your own person the flying fortunes of Europe; in vain have you taken the eagle of Napoleon, and snatched *invincibility* from his standard; if now, when confederated Europe is ready to march, you take the lead in the desertion, and preach the penitence of Bonaparte and the poverty of England."

As to her poverty, you must not consider the money you spend in her defence, but the fortune you would lose if you were not defended; and further, you must recollect you will pay less to an immediate war than to a peace with a war establishment, and a war to follow it. Recollect further, that whatever be your resources, they must outlast those of all your enemies; and further, that your empire cannot be saved by a calculation. Besides, your wealth is only a part of your situation. The name you have established, the deeds you have achieved, and the part you have sustained, preclude you from a second place among nations; and when you cease to be the first, you are nothing.

—GRATTAN.

THE WAR WITH NAPOLEON.

IN other wars we have been a divided people: the effect of our external operations has been in some measure weakened by intestine dissension. When peace has returned, the breach has

widened, while parties have been formed on the merits of particular men, or of particular measures. These have all disappeared: we have buried our mutual animosities in a regard to the common safety. The sentiment of self-preservation, the first law which nature has impressed, has absorbed every other feeling; and the fire of liberty has melted down the discordant sentiments and minds of the British empire into one mass, and propelled them in one direction. Partial interests and feelings are suspended, the spirits of the body are collected at the heart, and we are awaiting with anxiety, but without dismay, the discharge of that mighty tempest which hangs upon the skirts of the horizon, and to which the eyes of Europe and of the world are turned in silent and awful expectation. While we feel solicitude, let us not betray dejection, nor be alarmed at the past successes of our enemy, which are more dangerous to himself than to us, since they have raised him from obscurity to an elevation which has made him giddy, and tempted him to suppose everything within his power. The intoxication of his success is the omen of his fall. What though he has carried the flames of war throughout Europe, and gathered as a nest the riches of the nations, while none peeped, nor muttered, nor moved the wing? he has yet to try his fortune in another field; he has yet to contend on a soil filled with the monuments of freedom, enriched with the blood of its defenders—with a people who, animated with one soul, and inflamed with zeal for their laws and for their prince, are armed in defence of all that is dear or venerable,—their wives, their parents, their children, the sanctuary of God, and the sepulchre of their fathers. We will not suppose there is one who will be deterred from exerting himself in such a cause, by a pusillanimous regard to his safety, when he reflects that he has already lived too long who has survived the ruin of his country; and that he who can enjoy life after such an event, deserves not to have lived at all. It will suffice us, if our mortal existence, which is at most but a span, be co-extended with that of the nation which gave us birth. We will gladly quit the scene, with all that is noble and august, innocent and holy; and instead of wishing to survive the oppression of weakness, the violation of beauty, and the extinction of everything on which the heart can repose, welcome the shades which will hide from our view such horrors. To form an adequate idea of the duties of this crisis, it will be necessary to raise your minds to a level with your station, to extend your views to a distant futurity, and to consequences the

most certain, though most remote. By a series of criminal enterprises, by the successes of guilty ambition, the liberties of Europe have been gradually extinguished; the subjugation of Holland, Switzerland, and the free towns of Germany has completed that catastrophe; and we are the only people in the eastern hemisphere who are in possession of equal laws and a free constitution. Freedom, driven from every spot on the Continent, has sought an asylum in a country which she always chose for her favorite abode; but she is pursued even here, and threatened with destruction. The inundation of lawless power, after covering the whole earth, threatens to follow us here; and we are most exactly, most critically placed, in the only aperture where it can be successfully repelled—in the Thermopylæ of the universe. As far as the interests of freedom are concerned,—the most important by far of sublunary interests,—you, my countrymen, stand in the capacity of the federal representatives of the human race; for with you it is to determine (under God) in what condition the latest posterity shall be born; their fortunes are intrusted to your care, and on your conduct at this moment depends the color and complexion of their destiny. If liberty, after being extinguished on the Continent, is suffered to expire here, whence is it ever to emerge in the midst of that thick night that will invest it? It remains with you, then, to decide whether that freedom, at whose voice the kingdoms of Europe awoke from the sleep of ages, to run a career of virtuous emulation in everything great and good; the freedom which dispelled the mists of superstition, and invited the nations to behold their God—whose magic touch kindled the rays of genius, the enthusiasm of poetry, and the flame of eloquence; the freedom which poured into our lap opulence and arts, and embellished life with innumerable institutions and improvements, till it became a theatre of wonders; it is for you to decide whether this freedom shall yet survive, or be covered with a funeral pall, and wrapt in eternal gloom. It is not necessary to await your determination. In the solicitude you feel to approve yourselves worthy of such a trust, every thought of what is afflicting in warfare, every apprehension of danger must vanish, and you are impatient to mingle in the battle of the civilized world. Go, then, ye defenders of your country, accompanied with every auspicious omen; advance with alacrity into the field, where God himself musters the hosts to war. Religion is too much interested in your success not to lend you her aid; she will shed over this enterprise

her selectest influence. While you are engaged in the field, many will repair to the closet, many to the sanctuary; the faithful of every name will employ that prayer which has power with God; the feeble hands which are unequal to any other weapon, will grasp the sword of the Spirit; and from myriads of humble, contrite hearts, the voice of intercession, supplication, and weeping will mingle in its ascent to heaven with the shouts of battle and the shock of arms. While you have everything to fear from the success of the enemy, you have every means of preventing that success, so that it is next to impossible for victory not to crown your exertions. The extent of your resources, under God, is equal to the justice of your cause. But should Providence determine otherwise, should you fall in this struggle, should the nation fall, you will have the satisfaction (the purest allotted to man) of having performed your part; your names will be enrolled with the most illustrious dead; while posterity, to the end of time, as often as they revolve the events of this period, (and they will incessantly revolve them,) will turn to you a reverential eye, while they mourn over the freedom which is entombed in your sepulchre. I cannot but imagine the virtuous heroes, legislators, and patriots, of every age and country, are bending from their elevated seats to witness this contest, as if they were incapable, till it be brought to a favorable issue, of enjoying their eternal repose. Enjoy that repose, illustrious immortals! Your mantle fell when you ascended; and thousands, inflamed with your spirit, and impatient to tread in your steps, are ready "to swear by Him that sitteth upon the throne, and liveth for ever and ever," they will protect Freedom in her last asylum, and never desert that cause which you sustained by your labors, and cemented with your blood. And Thou, sole Ruler among the children of men, to whom the shields of the earth belong, "gird on Thy sword, thou Most Mighty," go forth with our hosts in the day of battle! Impart, in addition to their hereditary valor, that confidence of success which springs from Thy presence! Pour into their hearts the spirit of departed heroes! Inspire them with Thine own; and, while led by Thine hand, and fighting under Thy banners, open Thou their eyes to behold in every valley, and in every plain, what the prophet beheld by the same illumination—chariots of fire, and horses of fire! "Then shall the strong man be as tow, and the maker of it as a spark; and they shall both burn together, and none shall quench them."

—Robert Hall.

ON PARLIAMENTARY PRIVILEGE.

I COME now to speak upon what, indeed, I would have gladly avoided, had I not been particularly pointed at for the part I have taken in this bill. It has been said by a noble lord on my left hand, that *I* likewise am running the race of popularity. If the noble lord means by popularity, that applause bestowed by after ages on good and virtuous actions, I have long been struggling in that race,—to what purpose, all-trying time can alone determine; but if the noble lord means that mushroom popularity which is raised without *merit*, and lost without a *crime*, he is much mistaken in his opinion. I defy the noble lord to point out a single action of my life where the popularity of the times ever had the smallest influence on my determinations.

I thank God, I have a more permanent and steady rule for my conduct—the dictates of my own breast. Those that have foregone that pleasing adviser, and given up their minds to be the slave of every popular impulse, I sincerely pity; I pity them still more, if their vanity leads them to mistake the shouts of a mob for the trumpet of fame. Experience might inform them that many who have been saluted with the huzzas of a crowd one day, have received their execrations the next; and many who, by the popularity of the times, have been held up as spotless patriots, have, nevertheless, appeared upon the historian's page, where truth has triumphed over delusion, the assassins of liberty.

Why, then, the noble lord can think I am ambitious of present popularity, that echo of folly and shadow of renown, I am at a loss to determine. Besides, I do not know that the bill now before your lordships *will* be popular; it depends much upon the caprice of the day. It may *not be* popular to compel people to to pay their debts; and, in that case, the present must be a very *un*popular bill. It may not be popular, neither, to take away any of the privileges of parliament: for I very well remember, and many of your lordships may remember, that not long ago, the popular cry was for the extension of privileges; and so far did they carry it at that time, that it was said that privilege protected members even in criminal actions; nay, such was the power of popular prejudices over weak minds, that the very decisions of some of the courts were tinctured with this doc-

trine. It was indubitably an *abominable* doctrine: I thought so *then*, and think so *still;* but nevertheless, it *was* a popular doctrine, and came immediately from those who are called the friends of liberty—how *deservedly* time will show.

True liberty, in my opinion, can only exist when justice is equally administered to all—to the king and to the beggar. Where is the *justice*, then, or where is the *law*, that protects a member of parliament more than any other man from the punishment due to his crimes? The laws of this country allow no place nor employment to be a sanctuary for crimes; and where I have the honor to sit as a judge, neither royal favor nor popular applause shall ever protect the guilty. I have now only to beg pardon for having employed so much of your lordships' time, and am sorry a bill fraught with so good consequences, has not met with an abler advocate; but I doubt not your lordships' determination will convince the world, that a bill calculated to contribute so much to the equal distribution of justice as the present, requires, with your lordships, but very little support.

—MANSFIELD.

THE BATTLE OF WATERLOO.

(A.D. 1815.)

THERE was a sound of revelry by night,
And Belgium's capital had gather'd then
Her beauty and her chivalry, and bright
The lamps shone o'er fair women and brave men;
A thousand hearts beat happily; and when
Music arose with its voluptuous swell,
Soft eyes look'd love to eyes which spake again,
And all went merry as a marriage bell;
But hush! hark! a deep sound strikes like a rising knell!

Did ye not hear it?—No; 'twas but the wind,
Or the car rattling o'er the stony street;
On with the dance! let joy be unconfined;
No sleep till morn, when Youth and Pleasure meet
To chase the glowing hours with flying feet—
But hark! that heavy sound breaks in once more,
As if the clouds its echo would repeat;
And nearer, clearer, deadlier than before!
Arm! Arm! it is—it is—the cannon's opening roar!

Within a window'd niche of that high hall,
Sate Brunswick's fated chieftain; he did hear
That sound the first amid the festival,
And caught its tone with Death's prophetic ear;
And when they smiled because he deem'd it near,
His heart more truly knew that peal too well,
Which stretch'd his father on a bloody bier,
And roused the vengeance blood alone could quell:
He rush'd into the field, and, foremost fighting, fell!

Ah! then and there was hurrying to and fro,
And gathering tears, and tremblings of distress,
And cheeks all pale, which but an hour ago
Blush'd at the praise of their own loveliness;
And there were sudden partings, such as press
The life from out young hearts, and choking sighs
Which ne'er might be repeated; who could guess
If ever more should meet those mutual eyes,
Since upon night so sweet such awful morn could rise!

And there was mounting in hot haste; the steed,
The mustering squadron, and the clattering car,
Went pouring forward with impetuous speed,
And swiftly forming in the ranks of war;
And the deep thunder peal on peal afar;
And near, the beat of the alarming drum
Roused up the soldier ere the morning star;
While throng'd the citizens, with terror dumb,
Or whispering with white lips—"The foe! They come! They come!"

And wild and high the "Cameron's gathering" rose!
The war-note of Lochiel, which Albyn's hills
Have heard, and heard, too, have her Saxon foes;—
How in the noon of night her pibroch thrills,
Savage and shrill! But with the breath that fills
Their mountain-pipe, so fill the mountaineers
With the fierce native daring that instils
The stirring memory of a thousand years,
And Evan's, Donald's, fame rings in each clansman's ears!

And Ardennes waves above them her green leaves,
Dewy with nature's tear-drops, as they pass,
Grieving, if aught inanimate e'er grieves,
Over the unreturning brave—alas!
Ere evening, to be trodden like the grass
Which now beneath them, but above shall grow
In its next verdure, when this fiery mass
Of living valor, rolling on the foe,
And burning with high hope, shall moulder cold and low.

Last noon beheld them full of lusty life,
Last eve in Beauty's circle proudly gay,
The midnight brought the signal-sound of strife,
The morn the marshalling in arms,—the day
Battle's magnificently stern array!
The thunder-clouds close o'er it, which when rent,
The earth is cover'd thick with other clay,
Which her own clay shall cover, heap'd and pent,
Rider and horse,—friend, foe,—in one red burial blent!

—Byron.

DEATH OF GEORGE THE THIRD.

(A.D. 1820.)

All the world knows the story of his malady—all history presents no sadder figure than that of the old man, blind and deprived of reason, wandering through the rooms of his palace, addressing imaginary parliaments, reviewing fancied troops, holding ghostly courts. I have seen his picture as it was taken at this time, hanging in the apartment of his daughter, the Landgravine of Hesse-Homburg—amidst books and Windsor furniture, and a hundred reminiscences of her English home. The poor old father is represented in a purple gown, his snowy beard falling over his breast—the star of his famous order still idly shining on it. He was not only sightless, he became utterly deaf. All light, all sound of human voices, all the pleasures of this world of God, were taken from him. Some slight lucid moments he had, in one of which the queen, desiring to see him, entered the room, and found him singing a hymn, and accompanying himself at the harpsichord. When he had finished, he knelt down and prayed aloud for her, and then for his family, and then for the nation, concluding with a prayer for himself, that it might please God to avert his heavy calamity from him, but if not, to give him resignation to submit. He then burst into tears, and his reason again fled.

What preacher need moralize on this story? what words save the simplest are requisite to tell it? It is too terrible for tears. The thought of such a misery smites me down in submission before the Ruler of kings and men, the Monarch supreme over empires and republics, the inscrutable Dispenser of life, death, happiness, victory. "O brothers," I said to those who heard me first in America—"O brothers, speaking the same dear mother

tongue—O comrades, enemies no more, let us take a mournful hand together, as we stand by this royal corpse, and call a truce to battle! Low he lies to whom the proudest used to kneel once, and who was cast lower than the poorest; dead, whom millions prayed for in vain. Driven off his throne; buffeted by rude hands; with his children in revolt; the darling of his old age killed before him untimely; our Lear hangs over her breathless lips, and cries, 'Cordelia, Cordelia! stay a little!'

> 'Vex not his ghost!—oh, let him pass!—he hates him much
> That would upon the rack of this tough world
> Stretch him out longer!'

Hush, strife and quarrel, over the solemn grave! Sound, trumpets, a mournful march. Fall, dark curtain, upon his pageant, his pride, his grief, his awful tragedy!" —THACKERAY.

ON CRUELTY TO ANIMALS.

THE sufferings of the lower animals may, when out of sight, be out of mind. But more than this, these sufferings may be in sight, and yet out of mind. This is strikingly exemplified in the sports of the field, in the midst of whose varied and animating bustle that cruelty which all along is present to the senses may not for one moment have been present to the thoughts. There sits a somewhat ancestral dignity and glory on this favorite pastime of joyous old England; when the gallant knighthood, and the hearty yeomen, and the amateurs or virtuosos of the chase, and the full assembled jockeyship of half a province, muster together in all the pride and pageantry of their great emprise—and the panorama of some noble landscape, lighted up with autumnal clearness from an unclouded heaven, pours fresh exhilaration into every blithe and choice spirit of the scene—and every adventurous heart is braced and impatient for the hazards of the coming enterprise—and even the high-breathed coursers catch the general sympathy, and seem to fret in all the restiveness of their yet checked and irritated fire, till the echoing horn shall set them at liberty—even that horn which is the knell of death to some trembling victim now brought forth of its lurking-place to the delighted gaze, and borne down upon with the full and open cry of its ruthless pursuers. Be assured that, amid the whole glee and fervency of this tumultuous enjoyment, there might not, in

one single bosom, be aught so fiendish as a principle of naked and abstract cruelty. The fear which gives its lightning-speed to the unhappy animal; the thickening horrors, which, in the progress of exhaustion, must gather upon its flight; its gradually sinking energies, and, at length, the terrible certainty of that destruction which is awaiting it; that piteous cry which the ear can sometimes distinguish amid the deafening clamor of the blood-hounds as they spring exultingly upon their prey; the dread massacre and dying agonies of a creature so miserably torn—all this weight of suffering, we admit, is not once sympathized with; but it is just because the suffering itself is not once thought of. It touches not the sensibilities of the heart; but just because it is never present to the notice of the mind. We allow that the hardy followers in the wild romance of this occupation—we allow them to be reckless of pain; but this is not rejoicing in pain. Theirs is not the delight of the savage, but the apathy of unreflecting creatures. They are wholly occupied with the chase itself and its spirit-stirring accompaniments, nor bestow one moment's thought on the dread violence of that infliction upon sentient nature which marks its termination. It is the spirit of the competition, and it alone, which goads onward this hurrying career; and even he who in at the death is foremost in the triumph, although to him the death itself is in sight, the agony of its wretched sufferer is wholly out of mind.

Man is the direct agent of a wide and continual distress to the lower animals, and the question is, Can any method be devised for its alleviation? On this subject that scriptural image is strikingly realized: "The whole inferior creation groaning and travailing together in pain," because of him. It signifies not to the substantive amount of the suffering, whether this be prompted by the hardness of his heart, or only permitted through the heedlessness of his mind. In either way it holds true, not only that the arch-devourer man stands pre-eminent over the fiercest children of the wilderness as an animal of prey, but that for his lordly and luxurious appetite, as well as for his service or merest curiosity and amusement, Nature must be ransacked throughout all her elements. Rather than forego the veriest gratifications of vanity, he will wring them from the anguish of wretched and ill-fated creatures; and whether for the indulgence of his barbaric sensuality or barbaric splendor, can stalk paramount over the sufferings of that prostrate creation which has been placed beneath his feet. That beauteous domain whereof he has been

constituted the terrestrial sovereign, gives out so many blissful and benignant aspects; and whether we look to its peaceful lakes, or to its flowery landscapes, or its evening skies, or to all that soft attire which overspreads the hills and the valleys, lighted up by smiles of sweetest sunshine, and where animals disport themselves in all the exuberance of gaiety—this surely were a more befitting scene for the rule of clemency, than for the iron rod of a murderous and remorseless tyrant. But the present is a mysterious world wherein we dwell. It still bears much upon its materialism of the impress of Paradise. But a breath from the air of Pandemonium has gone over its living generations; and so "the fear of man and the dread of man is now upon every beast of the earth, and upon every fowl of the air, and upon all that moveth upon the earth, and upon all the fishes of the sea: into man's hands are they delivered: every moving thing that liveth is meat for him; yea, even as the green herbs, there have been given to him all things." Such is the extent of his jurisdiction, and with most full and wanton license has he revelled among its privileges. The whole earth labors and is in violence because of his cruelties; and from the amphitheatre of sentient nature there sounds in fancy's ear the bleat of one wide and universal suffering—a dreadful homage to the power of nature's constituted lord.

These sufferings are really felt. The beasts of the field are not so many automata without sensation, and just so constructed as to give forth all the natural signs and expressions of it. Nature hath not practised this universal deception upon our species. These poor animals just look, and tremble, and give forth the very indications of suffering that we do. Theirs is the distinct cry of pain. Theirs is the unequivocal physiognomy of pain. They put on the same aspect of terror on the demonstrations of a menaced blow. They exhibit the same distortions of agony after the infliction of it. The bruise, or the burn, or the fracture, or the deep incision, or the fierce encounter with one of equal or superior strength, just affects them similarly to ourselves. Their blood circulates as ours. They have pulsations in various parts of the body like ours. They sicken, and they grow feeble with age, and finally, they die just as we do. They possess the same feelings; and, what exposes them to like suffering from another quarter, they possess the same instincts with our own species. The lioness robbed of her whelps causes the wilderness to ring aloud with the proclamation of her wrongs: or the bird

whose little household has been stolen, fills and saddens all the grove with melodies of deepest pathos. All this is palpable even to the general and unlearned eye; and when the physiologist lays open the recesses of their system by means of that scalpel, under whose operation they just shrink and are convulsed as any living subject of our own species, there stands forth to view the same sentient apparatus, and furnished with the same conductors for the transmission of feeling to every minutest pore upon the surface. Theirs is an unmixed and unmitigated pain—the agonies of martyrdom without the alleviation of the hopes and the sentiments whereof they are incapable. When they lay them down to die, their only fellowship is with suffering; for in the prison-house of their beset and bounded faculties there can no relief be afforded by communion with other interests or other things. The attention does not lighten their distress as it does that of man, by carrying off his spirit from that existing pungency and pressure which might else be overwhelming. There is but room in their mysterious economy for one inmate, and that is the absorbing sense of their own single and concentrated anguish. And so in that bed of torment whereon the wounded animal lingers and expires, there is an unexplored depth and intensity of suffering which the poor dumb animal itself cannot tell, and against which it can offer no remonstrance—an untold and unknown amount of wretchedness of which no articulate voice gives utterance. But there is an eloquence in its silence; and the very shroud which disguises it only serves to aggravate its horrors. —CHALMERS.

PARLIAMENTARY REFORM.

DREADING therefore the danger of total, and seeing the difficulties as well as the unprofitableness of partial alteration, I object to this first step towards a change in the constitution of the House of Commons. There are wild theories abroad. I am not disposed to impute an ill motive to any man who entertains them. I will believe such a man to be as sincere in his conviction of the possibility of realizing his notions of change without risking the tranquillity of the country, as I am sincere in my belief of their impracticability, and of the tremendous danger of attempting to carry them into effect; but for the sake of the world as well as for our own safety, let us be cautious and firm. Other

nations, excited by the example of the liberty which this country has long possessed, have attempted to copy our constitution; and some of them have shot beyond it in the fierceness of their pursuit. I grudge not to other nations that share of liberty which they may acquire: in the name of God let them enjoy it! But let us warn them that they lose not the object of their desire by the very eagerness with which they attempt to grasp it. Inheritors and conservators of rational freedom, let us, while others are seeking it in restlessness and trouble, be a steady and shining light to guide their course, not a wandering meteor to bewilder and mislead them.

Let it not be thought that this is an unfriendly or disheartening counsel to those who are either struggling under the pressure of harsh government, or exulting in the novelty of sudden emancipation. It is addressed much rather to those who, though cradled and educated amidst the sober blessings of the British Constitution, pant for other schemes of liberty than those which that Constitution sanctions—other than are compatible with a just equality of civil rights, or with the necessary restraints of social obligation; of some of whom it may be said, in the language which Dryden puts into the mouth of one of the most extravagant of his heroes, that

> "They would be free as nature first made man,
> Ere the base laws of servitude began,
> When wild in woods the noble savage ran."

Noble and swelling sentiments!—but such as cannot be reduced into practice. Grand ideas!—but which must be qualified and adjusted by a compromise between the aspirings of individuals and a due concern for the general tranquillity; must be subdued and chastened by reason and experience, before they can be directed to any useful end! A search after abstract perfection in government may produce, in generous minds, an enterprise and enthusiasm to be recorded by the historian, and to be celebrated by the poet: but such perfection is not an object of reasonable pursuit, because it is not one of possible attainment; and never yet did a passionate struggle after an absolutely unattainable object fail to be productive of misery to an individual—of madness and confusion to a people. As the inhabitants of those burning climates which lie beneath a tropical sun sigh for the coolness of the mountain and the grove; so (all history instructs us) do nations which have basked for a time in the torrent blaze

of an unmitigated liberty too often call upon the shades of despotism, even of military despotism, to cover them—

"O quis me gelidis in vallibus Hæmi
Sistat, et ingenti ramorum protegat umbrâ!"

—a protection which blights while it shelters; which dwarfs the intellect, and stunts the energies of man, but to which a wearied nation willingly resorts from intolerable heats, and from perpetual danger of convulsion.

Our lot is happily cast in the temperate zone of freedom: the clime best suited to the development of the moral qualities of the human race; to the cultivation of their faculties, and to the security as well as the improvement of their virtues:—a clime not exempt indeed from variations of the elements, but variations which purify while they agitate the atmosphere that we breathe. Let us be sensible of the advantages which it is our happiness to enjoy. Let us guard with pious gratitude the flame of genuine liberty, that fire from heaven, of which our constitution is the holy depository; and let us not, for the chance of rendering it more intense and more radiant, impair its purity or hazard its extinction!

The noble lord is entitled to the acknowledgments of the House for the candid, able, and ingenuous manner in which he has brought forward his motion. If in the remarks which I have made upon it there has been anything which has borne the appearance of disrespect towards him, I hope he will acquit me of having so intended it. That the noble lord will carry his motion this evening, I have no fear; but with the talents which he has shown himself to possess, and with (I sincerely hope) a long and brilliant career of parliamentary distinction before him, he will no doubt renew his efforts hereafter. Although I presume not to expect that he will give any weight to observations or warnings of mine, yet on this, probably the last, opportunity which I shall have, of raising my voice on the question of Parliamentary Reform, while I conjure the House to pause before it consents to adopt the proposition of the noble lord, I cannot help conjuring the noble lord himself to pause before he again presses it upon the country. If, however, he shall persevere, and in his perseverance shall be successful—and if the results of that success shall be such as I cannot help apprehending—his be the triumph to have precipitated those results—be mine the consolation that to the utmost, and the latest of my power, I have opposed them.

—CANNING.

PARLIAMENTARY REFORM.

My Lords,—I do not disguise the intense solicitude which I feel for the event of this debate, because I know full well that the peace of the country is involved in the issue. I cannot speak —look without dismay at the rejection of the measure. But, grievous as may be the consequence of a temporary defeat—temporary it can only be ; for its ultimate and even speedy success is certain. Nothing can now stop it. Do not suffer yourselves to be persuaded that even if the present ministers were driven from the helm, any one could steer you through the troubles which surround you, without reform. But our successors would take up the task in circumstances far less suspicious. Under them you would be fain to grant a bill, compared with which the one we now offer you is moderate indeed. Hear the parable of the Sybil, for it conveys a wise and wholesome moral. She now appears at your gate, and offers you mildly the volumes—the precious volumes—of wisdom and peace. The price she asks is reasonable—to restore the franchise, which, without any bargain, you *ought* voluntarily to give : you refuse her terms—her moderate terms—she darkens the porch no longer. But soon, for you cannot do without her wares, you call her back ;—again she comes, but with diminished treasures ; the leaves of the book are in part torn away by lawless hands—in part defaced with characters of blood. But the prophetic maid has risen in her demands—it is parliaments by the year—it is vote by the ballot—it is suffrage by the million. From this you turn away indignant, and, for the second time, she departs. Beware of her third coming, for the treasure you must have ; and what price she may next demand who shall tell ? it may be even the mace which rests upon that woolsack. What may follow your course of obstinacy, if persisted in, I cannot take upon me to predict, nor do I wish to conjecture : but this I know full well, that, as sure as man is mortal, and to err is human, justice deferred enhances the price at which you must purchase safety and peace ; nor can you expect to gather in another crop than they did who went before you, if you persevere in their utterly abominable husbandry, of sowing injustice and reaping rebellion.

But among the awful considerations that now bow down my mind, there is one which stands pre eminent above the rest.

You are the highest judicature in the realm: you sit here as judges and decide all causes, civil and criminal, without appeal. It is a judge's first duty never to pronounce sentence, in the most trifling case, without hearing. Will you make this an exception? Are you really prepared to determine, but not to hear, the mighty cause upon which a nation's hopes and fears hang? You are. Then beware of your decision. Rouse not, I beseech you, a peace-loving but a resolute people; alienate not from your body the affections of a whole empire. As your friend, as the friend of my order, as the friend of my country, as the faithful servant of my sovereign, I counsel you to assist with your uttermost efforts in preserving the peace, and upholding and perpetuating the constitution. Therefore, I pray and I exhort you not to reject this measure. By all you hold most dear,—by all the ties that bind every one of us to our common order and our common country, I solemnly adjure you,—I warn you,—I implore you,—yea, on my bended knees, I supplicate you—reject not this bill. —BROUGHAM.

THE FUNERAL OF NAPOLEON I.

(15*th December* 1840.)

COLD and brilliant streams the sunlight on the wintry banks of Seine,
Gloriously the imperial city rears her pride of tower and fane—
Solemnly with deep voice pealeth, Notre Dame, thine ancient chime,
Minute guns the death-bell answer in the same deep measured time.

On the unwonted stillness gather sounds of an advancing host,
As the rising tempest chafeth on St Helen's far-off coast;
Nearer rolls a mighty pageant—clearer swells the funeral strain,
From the barrier arch of Neuilly pours the giant burial train.

Dark with eagles is the sunlight—darkly on the golden air
Flap the folds of faded standards, eloquently mourning there—
O'er the pomp of glittering thousands, like a battle-phantom flits
Tatter'd flag of Jena, Friedland, Arcola, and Austerlitz.

Eagle-crown'd and garland-circled, slowly moves the stately car,
'Mid a sea of plumes and horsemen—all the burial pomp of war—
Riderless, a war-worn charger follows his dead master's bier—
Long since battle-trumpet roused him—he but lived to follow here.

From his grave 'mid ocean's dirges, moaning surge and sparkling foam,
Lo, the Imperial Dead returneth! lo, the Hero-dust comes home!
He hath left the Atlantic island, lonely vale and willow tree,
'Neath the Invalides to slumber, 'mid the Gallic chivalry.

NAPOLEON'S TOMB.

Glorious tomb o'er glorious sleepers! gallant fellowship to share—
Paladin and Peer and Marshal—France, thy noblest dust is there!
Names that light thy battle annals—names that shook the heart of earth!
Stars in crimson War's horizon—synonymes for martial worth!

Room within that shrine of heroes! place, pale spectres of the past!
Homage yield, ye battle-phantoms! Lo, your mightiest comes at last!
Was *his* course the Woe out-thunder'd from prophetic trumpet's lips?
Was *his* type the ghostly horseman shadow'd in the Apocalypse?

Gray-hair'd soldiers gather round him, relics of an age of war,
Followers of the Victor-Eagle, when his flight was wild and far:
Men who panted in the death-strife on Rodrigo's bloody ridge,
Hearts that sicken'd at the death-shriek from the Russian's shatter'd bridge;

Men who heard the immortal war-cry of the wild Egyptian fight—
"Forty centuries o'erlook us from yon Pyramid's gray height!"
They who heard the moans of Jaffa, and the breach of Acre knew—
They who rush'd their foaming war-steeds on the squares of Waterloo—

They who loved him—they who fear'd him—they who in his dark hour fled—
Round the mighty burial gather, spell-bound by the awful Dead!
Churchmen — Princes — Statesmen — Warriors — all a kingdom's chief array,
And the Fox stands—crownèd Mourner—by the Eagle's hero-clay!

But the last high rite is paid him, and the last deep knell is rung—
And the cannons' iron voices have their thunder-requiem sung—
And, 'mid banners idly drooping, silent gloom and mouldering state,
Shall the Trampler of the world upon the Judgment-trumpet wait.

Yet his ancient foes had given him nobler monumental pile,
Where the everlasting dirges moan'd around the burial Isle—
Pyramid upheaved by Ocean in his loneliest wilds afar,
For the War-King thunder-stricken from his fiery battle-car!

—*The Maple Leaf.*

TRUE GREATNESS.

Such was Napoleon Bonaparte. But some will say he was still a great man. This we mean not to deny. But we would have it understood that there are various kinds or orders of greatness, and that the highest did not belong to Bonaparte.

There are different orders of greatness. Among these, the first rank is unquestionably due to *moral* greatness, or magnanimity—to that sublime energy by which the soul, smitten with the love of virtue, binds itself indissolubly, for life and for death, to truth and duty—espouses as its own the interests of human nature—scorns all meanness, and defies all peril—hears in its own conscience a voice louder than threatenings and thunders—withstands all the powers of the universe which would sever it from the cause of freedom and religion—reposes an unfaltering trust in God in the darkest hour, and is ever "ready to be offered up" on the altar of its country or of mankind.

Of this moral greatness, which throws all other forms of greatness into obscurity, we see not a trace in Napoleon. Though clothed with the power of a god, the thought of consecrating himself to the introduction of a new and higher era, to the exaltation of the character and condition of his race, seems never to have dawned on his mind. The spirit of disinterestedness and self-sacrifice seems not to have waged a moment's war with self-will and ambition.

His ruling passions, indeed, were singularly at variance with

magnanimity. Moral greatness has too much simplicity, is too unostentatious, too self-subsistent, and enters into others' interests with too much heartiness, to live an hour for what Napoleon always lived, to make itself the theme and gaze and wonder of a dazzled world.

Next to moral comes *intellectual* greatness, or genius in the highest sense of that word; and by this we mean that sublime capacity of thought through which the soul, smitten with the love of the true and the beautiful, essays to comprehend the universe, soars into the heavens, penetrates the earth, penetrates itself, questions the past, anticipates the future, traces out the general and all-comprehending laws of nature, binds together by innumerable affinities and relations all the objects of its knowledge, rises from the finite and transient to the infinite and the everlasting, frames to itself from its own fulness lovelier and sublimer forms than it beholds, discerns the harmonies between the world within and the world without us, and finds in every region of the universe types and interpreters of its own deep mysteries and glorious inspirations. This is the greatness which belongs to philosophers, and to the master-spirits in poetry and the fine arts.

Next comes the greatness of *action;* and by this we mean the sublime power of conceiving bold and extensive plans—of constructing and bringing to bear on a mighty object a complicated machinery of means, energies, and arrangements, and of accomplishing great outward effects.

To this head belongs the greatness of Bonaparte, and that he possessed it, we need not prove, and none will be hardy enough to deny. A man who raised himself from obscurity to a throne, who changed the face of the world, who made himself felt through powerful and civilized nations, who sent the terror of his name across seas and oceans, whose will was pronounced and feared as destiny, whose donatives were crowns, whose antechamber was thronged by submissive princes, who broke down the awful barrier of the Alps and made them a highway, and whose fame was spread beyond the boundaries of civilization to the steppes of the Cossack and the deserts of the Arab—a man who has left this record of himself in history, has taken out of our hands the question whether he shall be called great. All must concede to him a sublime power of action—an energy equal to great effects.

—CHANNING.

MARVELS OF HUMAN CALORIC.

We must be plain with our readers. It will not do to mince matters where questions of science are concerned. Dainty people will, no doubt, object to the proposition we are about to advance. Nevertheless, we persist. Fearless of the consequences, utterly unawed by the hisses which we know will ensue, we proceed to lay down the following assertion:—We are all living stoves—walking fireplaces—furnaces in the flesh.

Now we do not intend to say that any one can light a cigar, or boil an egg, or even ignite a lucifer match at these human hearths. Still, we repeat, these bodies of ours are stoves—fireplaces—furnaces, if these terms can be applied to any apparatus for the express production of caloric. And is not heat produced in the human body by the union of oxygen with carbon, just the same as by the burning of wood in an open fireplace? and does not this union take place in the capillaries of the blood-vessels?

But, granting that our bodies are veritable stoves, the reader will desire to know where we procure our fuel. Fortunately our coal and firewood are stored up in a very interesting form. They are laid before us in the shape of bread and butter, puddings and pies; rashers of bacon for the laborer, and haunches of venison or turtle-soup for the epicure. Instead of being brought up in scuttles, they are presented in turcens, dishes, or tumblers, or all of them, in pleasant succession.

In fact, whenever you send a person an invitation to dinner, you virtually request the honor of his company to take fuel; and when you see him enthusiastically employed on your dainties, you know that he is literally "shovelling" fuel into his corporeal stove. The ultimate form in which this fuel is burned in the capillaries is that of carbon, with a little hydrogen and sulphur; but we swallow it in the shape of fat, starch, sugar, alcohol, and other less inflammatory compounds. By far the most heating of these substances is fat; ten pounds of this material imported into your stove will do as much work—that is, will produce as much warmth as twenty-five pounds of starch, twenty-five of sugar, or even twenty-six of spirits.

And a pleasant thing it is to observe how sagaciously the instinct of man has fastened upon the articles which will best supply him with the species of fuel he requires. The Esquimaux

is extremely partial to oily fare. He does not know why. He never heard of the doctrine of animal heat; but he feels intuitively that bear's grease and blubber are the things for him. Condemn him to live on potatoes or Indian corn, and the poor fellow would resent the cruelty as much as an alderman of the old school if sentenced to subsist on water-gruel alone.

And the savage would be perfectly right. Exposed as he is to the fierce cold of a northern sky, every object around him plundering him of his caloric incessantly, what he needs is plenty of oily food, because from this he can produce the greatest quantity of heat. On the other hand, the native of the tropics, equally ignorant of animal chemistry, eschews the fiery diet, which his climate renders inappropriate, and keeps himself cool on rice, or dates, or watery fruits.

Hence we see the reason why a very stout man, if deprived of food, can keep up his corporeal fires for a longer time than a slender one. Human fat is fuel laid away for use. It constitutes a hoard of combustible material upon which the owner may draw whenever his ordinary supplies are intercepted. Let all plump persons, therefore, rejoice. We offer them our hearty, perhaps somewhat envious, congratulations. They, at any rate, are prepared to stand a long siege from cold.

For the same reason, animals which hybernate, like the bear, jerboa, marmot, dormouse, bat, and others, generally grow plump before they retire into winter quarters. Upon their capital of fat they subsist during their lethargy, their respiration being lessened, the pulse reduced to a few beats per minute, and the temperature perhaps nearly to the freezing point. But, when the season of torpor terminates, they issue from their caves and burrows meagre and ravenous, having burned up their stock of fuel, Bruin himself appearing to be anxious to defraud the perfumers of the unguent which is so precious in their eyes.

But perhaps the most striking feature in this warmth-producing apparatus within us, is the self-regulating power which it possesses. The fires on our domestic hearths decline at one moment, and augment at another. Sometimes the mistress of the house threatens to faint, on account of excessive heat; sometimes the master endeavors to improve the temperature by a passionate use of the poker, with an occasional growl respecting the excessive cold.

Were such irregularities to prevail unchecked in our fleshy stoves, we should suffer considerable annoyance. After a meal

of very inflammatory materials, or an hour spent in extraordinary exertion, the gush of caloric might throw the system into a state of high fever. How is this prevented? In some of our artificial stoves, little doors or slides are employed to control the admission of air; in furnaces connected with steam-engines, we may have dampers which will accomplish the same purpose by the ingenious workings of the machine itself.

But neither doors nor dampers, pokers nor stokers, can be employed in the bodily apparatus. If, on the one hand, our human fires should begin to flag from undue expenditure of heat, the appetite speaks out sharply, and compels the owner to look round for fuel. Hunger rings the bell, and orders up coals in the shape of savory meats. Or, should the summons be neglected, the garnered fat, as we have seen, is thrown into the grate to keep the furnace in play.

If, on the other hand, the heat of the body should become unreasonably intense, a very cunning process of reduction is adopted. When a substance grows too hot, the simplest method of bringing it into a cooler frame is to sprinkle it with water. This is precisely what occurs in our human frames. For no sooner does our internal heat rise above its standard height, than the perspiration tubes, with their six or seven millions of openings, indignant at the event, begin to pour out their fluid, so as to bathe the surface of the whole body. Whenever, therefore, a man becomes overheated by working, running, rowing, fighting, making furious speeches, or other violent exertions, he invariably resorts to this method of quenching the heat, "by pouring on water."

What shall we say, then, good reader? Speaking seriously, and looking at the question from a mere human point of view, could any project appear more hopeless than one for burning fuel in a soft, delicate fabric like the human body—a fabric composed for the most part of mere fluids—a fabric which might be easily scorched by excess of heat, or damaged by excess of cold? Does it not seem strange that a stove should have flesh for its walls, veins for its flues, and skin for its covering? Yet here is an apparatus which, as if by magic, produces a steady stream of heat—not trickling penuriously from its fountains, but flowing on day and night, winter and summer, without a moment's cessation, from January to December.

Carry this splendid machine to the coldest regions of the globe, set it up where the frosts are so crushing that nature seems to be trampled dead, still it pours out its mysterious supplies with un-

abated profusion. It is an apparatus, too, which does its work unwatched, and, in a great measure, unaided. The very fuel, which is thrown into it in random heaps, is internally sifted and sorted, so that the true combustible elements are conveyed to their place, and applied to their duty with unerring precision.

No hand is needed to trim its fires, to temper its glow, to remove its ashes. Smoke there is none, spark there is none, flame there is none. All is so delicately managed that the fairest skin is neither shrivelled nor blackened by the burning within. Is this apparatus placed in circumstances which rob it too fast of its caloric? Then the appetite becomes clamorous for food, and, in satisfying its demands, the fleshy stove is silently replenished. Or, are we placed in peril from superabundant warmth? Then the tiny floodgates of perspiration are flung open, and the surface is laid under water until the fires within are reduced to their wonted level.

Assailed on the one hand by heat, the body resists the attack, if resistance be possible, until the store of moisture is dissipated; assailed on the other by cold, it keeps the enemy at bay until the hoarded stock of fuel is expended. Thus protected, thus provisioned, let us ask whether these human hearths are not entitled to rank among the standing marvels of creation? For, is it not startling to find that, let the climate be mild or vigorous, let the wind blow from the sultry desert, or come loaded with polar sleet, let the fluctuations of temperature be as violent as they may without us, there shall still be a calm, unchanging, undying summer within us? —Dr. George Wilson.

THE VOLCANO AND THE EARTHQUAKE.

Volcanic rocks are formed mostly from melted rock or lava which has issued from the interior of the earth; sometimes from showers of ashes which have issued from the craters of volcanoes, and spread over the adjoining country.

Everywhere the earth is warmer, the deeper the place examined —about 1° Fahrenheit for every fifty-four feet. From this, the existence of volcanoes at so many parts of the earth's surface, of hot springs at others, from the water of artesian wells being everywhere warmer the greater the depth from which it comes, and other considerations, it has been thought not improbable that at a great depth the matter of the earth is so hot as to be in the

MOUNT VESUVIUS.

fluid state, like molten lava. It has even been conjectured that at one time the whole of the earth was one intensely hot fluid mass, and that the solid land has been formed by the more rapid cooling of the parts at the surface.

Volcanoes in a state of eruption present several remarkable phenomena. Flame, smoke, and large hot masses are projected from the crater, often to a considerable height. Mr. Darwin describes, as follows, an eruption of the volcano of Osorno, in South America :—"At midnight, the sentry observed something like a large star, which gradually increased in size till about three o'clock, when it presented a very magnificent spectacle. By the aid of a glass, dark objects, in constant succession, were seen, in the midst of a great glare of red light, to be thrown up and to fall down. The light was sufficient to cast on the water a long bright reflection. Large masses of molten matter seem very commonly to be cast out of the crater in this part of the Cordillera. I was assured that when the Corcovado is in eruption, great masses are projected upwards, and are seen to burst in the air, assuming many fantastical forms, such as trees; their size must be immense, for they can be distinguished from the high

land behind S. Carlos, which is no less than ninety-three miles from the Corcovado."

Showers of ashes are also projected from volcanoes, which rise to a great height and spread very far. These are sometimes so dense as to darken the towns and villages, so that the inhabitants must carry lanterns with them in the streets in the middle of the day. This has happened during the eruptions of Vesuvius, and in Quito during the eruptions of Pichincha. "Lava streams," says Humboldt, "are less dreaded than an eruption of ashes, a phenomenon which fills the imaginations of men with images of terror, from the vague tradition of the manner in which Herculaneum, Pompeii, and Stabiæ were destroyed." The streets of Pompeii were filled up by the enormous quantities of ashes which fell upon them during eruptions of Vesuvius.

Another striking feature of an eruption is the *lava-stream* which often issues from the sides of the volcanic mountain, and creeps with slow but steady steps over the adjoining country, which it covers with a bed of molten rock; destroying buildings, consuming the plants and trees it meets in its resistless progress, and thus covering the previous land with new land, and entirely altering the face of the country. An eruption of Vesuvius, in the early part of the year 1850, was accompanied by a stream of lava, which overwhelmed several farmhouses, a church, and priest's house, consumed orchards and forests; and the remarkable progress of which was witnessed by hundreds who came from the neighboring towns to see the phenomenon. The lava shone at night with a red, lurid glare, with bright flames where it met and consumed the trees, some of which leaped in the air with an explosion, caused by the sudden separation of the moisture by the heat of the burning mass which destroyed them.

The sites of existing volcanic action are numerous. In EUROPE—Etna in Sicily, Vesuvius in Naples, the Lipari Islands, and Stromboli; and Hecla in Iceland. In ASIA—Kamtschatka, the Kurile and Japan Isles, the Philippine Islands, Java, and Sumatra, and Central Asia, S.W. of the Altai mountains. In NORTH AMERICA—the Aleutian Isles, and mountains of Mexico, Guatemala, and several of the West India Islands. In SOUTH AMERICA—the districts of Quito, of Peru and Bolivia, and of Chili. The Sandwich Islands; the Friendly Islands; Mount Egmont in the northern Island of New Zealand; and Mount Erebus, in South Victoria, in the antarctic regions. The Azores, Canary Islands, and Cape de Verde Islands, are also volcanic districts.

The EARTHQUAKE, the name of which expresses its own meaning distinctly, is a phenomenon allied to the volcano, and produced most probably by the same causes which, in varied circumstances and different situations, give rise to volcanic eruptions. The districts of the earth's surface visited by earthquakes, within a recent period, are very extensive. They have been experienced in the Old World, from Iceland to Ceylon, from the Azores to Lake Baikal, from Abyssinia to the north of Norway, and from Kamtschatka to the north-west of Australia; in North America, between the great lakes and the Gulf of Mexico, and in Mexico; in Central America and the West Indies; and in South America, in Venezuela and Ecuador, and along the west coast to the south of Chili. There have been between two and three hundred slight earthquake shocks experienced in Britain. The motion of the land in the earthquake is, most usually, *undulatory*, like that of a wave. Sometimes there is a violent *vertical* motion from below upwards, which was strikingly exhibited in the great earthquake which overthrew Riobamba in 1797, when the bodies of many of the inhabitants were hurled to Cullca, a hill several hundred feet in height, and on the opposite side of the river Lican. In the same earthquake, the *circular* or *gyratory* concussions were exhibited, when the furniture of one house was found under the ruins of another; and this latter kind of motion, as well as the undulatory motion, occurred in the great earthquake at Lisbon in 1755.

Humboldt concludes that "the forces causing earthquakes are not seated near the surface in the thin crust of the earth, but deep in the interior of our planet, whence through fissures and unfilled veins they act simultaneously at widely distant points of the earth's surface."—*Views of Nature.*

Allied to the earthquake, but of a more regular and peaceful character, is that slow movement going on in many parts of the world, by which the land gradually rises above, or sinks below, the level of the sea. This is going on at the north shore of the Baltic Sea, which seems to be rising at the rate of several feet in a century above the level of the sea. The island of Reguain, on the west coast of Aracan, has been in process of gradual upheaval for some time; while the lagoons and barrier-reefs of the Pacific are explained by Mr. Darwin on the supposition of a *subsiding* of the land; and a similar action is believed to be going on in parts of the southern shores of the Baltic. —REID.

DEFENCE OF PELTIER.

GENTLEMEN, there is one point of view in which this case seems to merit your most serious attention. The real prosecutor is the master of the greatest empire the civilized world ever saw; the defendant is a defenceless, proscribed exile. I consider this case, therefore, as the first of a long series of conflicts between the greatest power in the world, and the ONLY FREE PRESS remaining in Europe. Gentlemen, this distinction of the English press is new—it is a proud and a melancholy distinction. Before the great earthquake of the French Revolution had swallowed up all the asylums of free discussion on the Continent, we enjoyed that privilege, indeed, more fully than others, but we did not enjoy it exclusively. In Holland, in Switzerland, in the imperial towns of Germany, the press was either legally or practically free.

But all these have been swallowed by that fearful convulsion which has shaken the uttermost corners of the earth. They are destroyed, and gone for ever! One asylum of free discussion is still inviolate. There is still one spot in Europe where man can freely exercise his reason on the most important concerns of society, where he can boldly publish his judgment on the acts of the proudest and most powerful tyrants. The press of England is still free. It is guarded by the free constitution of our forefathers. It is guarded by the hearts and arms of Englishmen, and I trust I may venture to say that, if it be to fall, it will fall only under the ruins of the British empire. It is an awful consideration, gentlemen. Every other monument of European liberty has perished. That ancient fabric which has been gradually reared by the wisdom and virtue of our fathers still stands. It stands, thanks be to God! solid and entire,—but it stands alone, and it stands in ruins! Believing, then, as I do, that we are on the eve of a great struggle,—that this is only the first battle between reason and power—that you have now in your hands, committed to your trust, the only remains of free discussion in Europe, now confined to this kingdom; addressing you, therefore, as the guardians of the most important interests of mankind; convinced that the unfettered exercise of reason depends more on your present verdict than on any other that was ever delivered by a jury,—I trust I may rely with confidence on the issue,—I trust that you will

consider yourselves as the advanced guard of liberty, as having this day to fight the first battle of free discussion against the most formidable enemy that it ever encountered!

—MACKINTOSH.

THE DEFENCE OF JELLALABAD.

(1842.)

ALTHOUGH left to their own resources, the garrison of Jellalabad found, in their own indomitable fortitude and perseverance, and the courage and capacity of their leaders, means of defence which, in the circumstances, would otherwise have seemed unattainable. When Sale first found himself reduced to his own forces after the Cabul disaster, he had just 2500 men, of whom, in the middle of February, only 2273 were effective; of these, 838 were Sepoys. The place, though nominally a fortress, had in reality very little means of defence. The ramparts were on all sides in a ruinous state, in some actually fallen down; yawning breaches, in many places, would admit a company of foot soldiers abreast; the ditch, in others, was so filled up that a half troop might trot in line. With indefatigable vigor and perseverance, Sale, aided by his gifted engineer, Broadfoot, set himself to work, the moment he got possession in November, to repair the fortifications; and with such success were his exertions attended, that, before the end of January, the breaches and ruined places in the walls were all repaired, a ditch ten feet deep and fourteen broad everywhere cleared out round the works, and the whole buildings within point-blank range of the works levelled. They were thus secure from a *coup-de-main*, or siege operations from any Asiatic army without cannon; but this afforded no safeguard against the approaches of famine, which were seriously to be apprehended, as, on the 19th February, they had only provisions for the men for seventy, for the horses for twenty-five days. Forage and food in abundance were to be had in the neighboring villages, but they were of no use to the besieged, as they had neither money to buy them, nor cavalry to forage in presence of Akbar Khan, who, with a large body of horse, lay within a few miles distant. The garrison, however, were in good heart, and confidently looked forward to being delivered by Pollock; and their courage received an additional stimulus by the heroic conduct of Lady Sale, who, before being made prisoner by the Affghans,

wrote to her husband to allow no consideration of her danger to interfere with his performing his duty, and defending the place to the last extremity. But, at the very time when this brave garrison were with reason congratulating themselves on the security which their indefatigable efforts had gained for them, a terrible calamity ensued. On the 19th February, at the very moment that Sale and M'Gregor were writing to Pollock, urging his early advance to their relief, an earthquake of fearful severity was felt at Jellalabad. The shocks were so violent that the ramparts suddenly yawned, and in many places were thrown down, and great part of the buildings in the town fell with a fearful crash. In the first moments of alarm, the garrison instinctively ran to arms, thinking that a mine had been sprung, and that an immediate assault might be expected. Fortunately, most of them, from doing so, got out of the building safe; but Colonel Monteith, the field-officer of the day, was overwhelmed by the fall of his house, and dug out of the ruins, buried up to the neck in rubbish. No less than a hundred shocks succeeded the first great one, which tended still to extend the devastation, and, while they continued, rendered impossible all attempts to arrest the mischief. Many governors, in the circumstances in which he was now placed, with his fortifications in a great measure ruined, and a superior and victorious enemy in the vicinity, would have deemed the post no longer tenable, and made the best of his way down to Peshawur. Not so Sale, Broadfoot, and their heroic followers. What they did has been recounted in the simple words of the latter. "No time," says Captain Broadfoot, "was lost. The shocks had scarcely ceased when the whole garrison was told off in working parties; and before night the breaches were scarped, the rubbish below cleared out, and the ditches below them dug out, while the great one on the Peshawur side was surrounded by a new gabion parapet. Another parapet was erected on the remains of the north-west bastion, with embrasures allowing the guns to flank the approach to the ruined gate; while that gate itself was rendered inaccessible by a trench in front of it; and in every bastion round the place a temporary parapet was raised. From the following day all the troops off duty were continually at work; and such was their energy and perseverance, that by the end of the month the parapets were entirely restored, or the curtains filled in where restoration was impracticable, and every battery re-established. The breaches had been built up, with

the rampart doubled in thickness, and the whole of the gates retrenched." The spirits of the garrison after this were much raised by the receipt of Lord Auckland's proclamation, declaring the misfortune that had occurred afforded only a fresh opportunity for displaying the power and resources of the British empire. They now looked forward confidently to being relieved. It was long, however, before the relief came. Meanwhile, such was the respect with which the garrison of Jellalabad had inspired the blockading force, that though Akbar Khan with a body of 7000 men lay in the close vicinity, and more than once actually approached the walls, he never ventured to engage the British who went out to meet him, and the blockade was kept up at a distance only. But still the position of the garrison was extremely precarious, and becoming more so every day. Provisions were growing very scarce. By the middle of March the men were put on short rations, the draught cattle, camels, and artillery horses began to be killed, and Sale's applications to Pollock for relief became daily more urgent. Still the terrors and mutinous temper of the Sepoys was such that no advance was practicable till the European troops arrived. At length the numerous obstacles which had opposed their advance were removed. The English dragoons (3d) and horse artillery reached the camp at Peshawur on the 30th, and next day Pollock gave orders to commence the march towards Jellalabad. The 33d, however—Wellington's old regiment—which was anxiously expected, did not come up for some days afterwards, and the march did not begin till the 5th of April.

On the morning of the 16th, the advanced guard came in sight of Jellalabad. The sight filled the garrison with the most enthusiastic joy : the soldiers thronged the walls ; the bands of every regiment went out to meet the conquerors, and struck up "God save the Queen !" as they passed by; and cheers which made the very welkin ring resounded through the air, as in proud array and with erect heads they entered the gates of the fortress. If the garrison of Jellalabad had good cause to welcome the conquerors of the Khyber with these military honors, they in their turn had as good reason to salute the garrison with equal distinction, for never had a defence been conducted with more fortitude and constancy. Great as were the efforts made by Pollock to disengage them, the aid would have come too late had it not been for their own indomitable spirit and resolution. On the 1st April, when almost at the last extremity for provisions, they made a

sortie, and carried off, in the very teeth of the enemy's covering parties, five hundred sheep and goats. This supply was of inestimable importance, for it gave them the means of subsistence till the probable period of their relief. Some days after, reports were spread by the blockading force of a great disaster sustained by Pollock in attempting to force the Khyber Pass; and on the 6th their whole guns fired a royal salute in honor of the supposed victory. In these circumstances, a council of war in the garrison decided that nothing could save them but a sudden irruption, which might drive the enemy to a distance, and enable them to aid Pollock's advance, and sweep the country some distance for additional supplies. It was resolved, accordingly, to make a general sally, which was fixed for daybreak on the morning of the 6th. Sale divided his troops into three columns: the centre, consisting of the 13th, five hundred strong, was under the command of Colonel Dennie; the left, of the same strength, composed of Sepoys, was under the orders of Colonel Monteith; and the right, consisting of one company of the 13th and one of the 35th, was led by Captain Havelock, an officer destined to deathless fame. A few guns and horsemen accompanied the sally, which was made by the Cabul and Peshawur gates at daybreak on the morning of the 7th. Akbar Khan had drawn up his troops, six thousand strong, in order of battle to defend his camp—his right resting on a fort, his left on the Cabul river, and some ruined works within eight hundred yards of the place being filled with Ghilzye marksmen. The attack was led by Havelock at the head of the skirmishers of the 13th, who forced their way, in spite of a stout resistance, through the ruined works, and then, pushing on, assailed the main line. Meanwhile Dennie, while nobly leading the second column to attack the fort, received a ball in the breast, of which he soon after expired. The assault of the fort, however, went on, and after an obstinate resistance it was carried; while at the same time Monteith forced back the enemy's right. Sale now directed a general assault on the Affghan camp. The artillery advanced at the gallop, and directed a heavy fire on the enemy's centre, while the infantry pressed forward in splendid style to complete their victory. The attacks all proved successful. Two of the columns penetrated the line near the same point; while the third, in spite of a heavy fire from three guns under cover, and repeated charges from the horse, drove the forces opposed to them headlong into the river. By seven in the morning, the victory was complete.

The enemy was driven off in great disorder towards Luyhman and Cabul, their camp captured, all the tents burnt, the blockade raised, and two cavalry standards taken, with four guns which had been captured from the British during the Cabul retreat. This recovery gave unbounded joy to the troops; but the victory, important as it was, was dearly purchased by the loss of Colonel Dennie, one of the brightest ornaments of the British army.

—ALISON.

DEFENCE OF HARDY.

GENTLEMEN,—My whole argument then amounts to no more than this, that before the crime of compassing THE KING'S DEATH can be found *by you, the Jury*, whose province it is to judge of its existence, it must be *believed by you* to have existed in point of fact. Before you can adjudge a point of fact, you *must believe it*—not suspect it, or imagine it, or fancy it, BUT BELIEVE IT; and it is impossible to impress the human mind with such a reasonable and certain belief as is necessary to be impressed, before a Christian man can adjudge his neighbor to the smallest penalty, much less to the pains of death, without having such evidence as a reasonable mind will accept of as the infallible test of truth. And what is that evidence? Neither more nor less than that which the constitution has established in the courts for the general administration of justice—namely, that the evidence convinces the jury, beyond all reasonable doubt, that the criminal *intention*, constituting the crime, existed in the mind of the man upon trial, and was the mainspring of his conduct. The rules of evidence, as they are settled by law, and adopted in its general administration, are not to be overruled or tampered with. They are founded in the charities of religion—in the philosophy of nature—in the truths of history, and in the experience of common life; and whoever ventures falsely to depart from them, let him remember that it will be meted to him in the same measure, and that both God and man will judge him accordingly. These are arguments addressed to your reasons and consciences, not to be shaken in upright minds by any precedent, for no precedents can sanctify injustice; if they could, every human right would long ago have been extinct upon the earth. If the State Trials in bad times are to be searched for precedents, what murders may you not commit? what law of humanity may you not trample upon? what rule

of justice may you not violate? and what maxim of wise policy may you not abrogate and confound? If precedents in bad times are to be implicitly followed, why should we have heard any evidence at all? You might have convicted without any evidence, for many have been so convicted, and in this manner murdered, even by Acts of Parliament. If precedents in bad times are to be followed, why should the Lords and Commons have investigated these charges and the Crown have put them into this course of judicial trial—since, without such a trial, and even after an acquittal upon one, they might have attainted all the prisoners by Act of Parliament? They did so in the case of Lord Strafford. There are precedents, therefore, for all such things; but such precedents as could not for a moment survive the times of madness and distraction which gave them birth, but which, as soon as the spurs of the occasions were blunted, were repealed, and execrated even by parliaments which, little as I may think of the present, ought not to be compared with it—parliaments sitting in the darkness of former times, in the night of freedom—before the principles of government were developed, and before the constitution became fixed. The last of these precedents, and all the proceedings upon it, were ordered to be taken off the file and burnt, to the intent that the same might no longer be visible in after-ages; an order dictated, no doubt, by a pious tenderness for national honor, and meant as a charitable covering for the crimes of our fathers. But it was a sin against posterity—it was a treason against society; for instead of commanding them to be burnt, they should rather have directed them to be blazoned in large letters upon the walls of our Courts of Justice, that, like the characters deciphered by the prophet of God to the eastern tyrant, they might enlarge and blacken in your sight, to terrify you from acts of injustice.

In times when the whole habitable earth is in a state of change and fluctuation—when deserts are starting up with civilized empires around you—and when men, no longer slaves to the prejudices of particular countries, much less to the abuses of particular governments, enlist themselves, like the citizens of an enlightened world, into whatever communities their civil liberties may be best protected in, it never can be for the advantage of this country to prove that the strict unextended letter of her laws is no security to its inhabitants. On the contrary, when so dangerous a lure is everywhere holding out to emigration, it will be found to be the wisest policy of Great Britain to set up her happy constitution,

the strict letter of her guardian laws, and the proud condition of equal freedom which her highest and her lowest subjects ought equally to enjoy;—it will be her wisest policy to set up these first of human blessings against those charms of change and novelty which the varying condition of the world is hourly displaying, and which may deeply affect the population and prosperity of our country.' In times when the subordination to authority is said to be everywhere but too little felt, it will be found to be the wisest policy of Great Britain to instil into the governed an almost superstitious reverence for the strict security of the laws, which, from their equality of principle, beget no jealousies or discontent; which, from their equal administration, can seldom work injustice; and which, from the reverence growing out of their mildness and antiquity, acquire a stability in the habits and affections of men far beyond the force of civil obligation: whereas severe penalties, and arbitrary constructions of laws intended for security, lay the foundations of alienation from every human government, and have been the cause of all the calamities that have come and are coming upon the earth. —ERSKINE.

BRITISH JUSTICE.

THE most obvious and important use of this perfect justice is, that it makes nations safe. Under common circumstances the institutions of justice seem to have little or no bearing upon the safety and security of a country; but in periods of little danger, when a nation, surrounded by foreign enemies, contends not for the boundaries of empire, but for the very being and existence of empire, then it is that the advantages of just institutions are discovered. Every man feels that he has a country, that he has something worth preserving, and worth contending for. Instances are remembered where the weak prevailed over the strong; one man recalls to mind when a just and upright judge protected him from unlawful violence, gave him back his vineyard, rebuked his oppressor, restored him to his rights, published, condemned, and rectified the wrong. This is what is called country. Equal rights to unequal possessions, equal justice to the rich and poor; this is what men come out to fight for, and to defend. Such a country has no legal injuries to remember, no legal murders to revenge, no legal robbery to redress; it is strong in its justice; it is then that the use and object of all this assemblage of gentlemen and arrangement of juries, and the deserved veneration in

which we hold the character of English judges, are understood in all their bearings, and in their fullest effects; men die for such things—they cannot be subdued by foreign force where such just practices prevail. The sword of ambition is shivered to pieces against such a bulwark. Nations fall where judges are unjust, because there is nothing which the multitude think worth defending; but nations do not fall which are treated as we are treated, but they rise as we have risen, and they shine as we have shone, and die as we have died, too much used to justice, and too much used to freedom, to care for that life which is not just and free. I call you all to witness if there is any exaggerated picture in this; the sword is just sheathed, the flag is just furled, the last sound of the trumpet has just died away. You all remember what a spectacle this country exhibited; one heart, one voice—one weapon, one purpose. And why? Because this country is a country of law; because the judge is a judge for the peasant as well as for the palace; because every man's happiness is guarded by fixed rules from tyranny and caprice.

There is another reason why every wise man is so scrupulously jealous of the character of English justice. It puts an end to civil dissension. What other countries obtain by bloody wars, is here obtained by the decisions of our own tribunals: unchristian passions are laid to rest by these tribunals; brothers are brothers again; the gospel resumes its empire, and because all confide in the presiding magistrate, and because a few plain men are allowed to decide upon their own conscientious impression of facts, civil discord, years of convulsion, endless crimes are spared; the storm is laid, and those who came in clamoring for revenge, go back together in peace from the hall of judgment to the loom and the plough, to the senate and the church.

The whole tone and tenor of public morals are affected by the state of supreme justice; it extinguishes revenge, it communicates a spirit of purity and uprightness to inferior magistrates; it makes the great good, by taking away impunity; it banishes fraud, obliquity, and solicitation, and teaches men that the law is their right. Truth is its handmaid, freedom is its child, peace is its companion; safety walks in its steps, victory follows in its train; it is the brightest emanation of the gospel; it is the greatest attribute of God; it is that centre round which human motives and passions turn; and justice, sitting on high, sees genius, and power, and wealth, and birth revolving round her throne; and teaches their paths, and marks out their orbits, and warns with

a loud voice, and rules with a strong arm, and carries order and discipline into a world, which, but for her, would only be a wild waste of passions. Look what we are, and what just laws have done for us;—a land of piety and charity; a land of churches and hospitals and altars; a nation of good Samaritans; a people of universal compassion. All lands, all seas, have heard we are brave. We have just sheathed that sword which defended the world; we have just laid down that buckler which covered the nations of the earth. God blesses the soil with fertility; English looms labor for every climate. All the waters of the globe are covered with English ships. We are softened by fine arts, civilized by humane literature, instructed by deep science; and every people, as they break their feudal chains, look to the founders and fathers of freedom for examples which may animate, and rules which may guide. If ever a nation was happy—if ever a nation was visibly blessed by God—if ever a nation was honored abroad, and left at home under a government (which we can now conscientiously call a liberal government) to the full career of talent, industry, and vigor, we are at this moment that people—and this is our happy lot. First, the gospel has done it, and then justice has done it; and he who thinks it his duty to labor that this happy condition of existence may remain, must guard the piety of these times, and he must watch over the spirit of justice which exists in these times. First, he must take care that the altars of God are not polluted, that the Christian faith is retained in purity and in perfection; and then turning to human affairs, let him strive for spotless, incorruptible justice;—praising, honoring, and loving the just judge, and abhorring, as the worst enemy of mankind, him who is placed there to "judge after the law, and who smites contrary to the law."

—Sydney Smith.

BATTLE OF SOBRAON.

(A.D. 1846.)

The attack was to have commenced at daybreak on the 10th February, but the mist rising from the river was so thick that nothing could be seen, and it was necessary to wait an hour till the sun had dispelled the vapor. Meanwhile, the troops were arranged in the order in which they were to proceed to the assault. On the extreme left, three brigades, composing Sir

Robert Dick's division, stood close to the margin of the river. His attack was to be headed by the 10th Queen's, supported by the 53d Queen's, led by Brigadier Stacey. Wilkinson's brigade was to follow two hundred yards in rear, while Ashburnham's formed the reserve to this wing. In the centre, Major-General Gilbert's division was formed close to, and partly in the village of Sobraon; while on the right, Sir Harry Smith's division extended round to the edge of the Sutlej on the other side. Thus the British troops formed an immense semicircle, each end of which touched the Sutlej, while in its centre was the village of SOBRAON, which gave its name to the battle. Brigadier Cureton s horse threatened the ford of Hureekee, opposite to which the enemy had stationed large bodies of cavalry. The remainder of the horse were in reserve behind the infantry. The Sikhs, consisting of thirty two regular battalions, occupied the interior of the intrenchments, which consisted of a triple line of works, one within another, flanked by formidable redoubts, the fire from which swept every part of the plain by which alone they could be approached.

When the fire of the British artillery, which was kept up with uncommon vigor and precision, and was admirably replied to by the Sikhs, had lasted three hours, the troops were moved up to the assault. Dick's division on the left led the way. The infantry marched steadily forward in line, the guns came up at the gallop, taking successive positions as they advanced, until they were within three hundred yards of the front line of the Sikh works, when they halted and poured in a concentrated fire on those parts of the works intended to be assaulted. Then the infantry rushed forward with a run, the 10th leading, supported by the 53d Queen s, and 43d and 59th native infantry. Such, however, was the vigor of the defence, that the bravest of the Europeans recoiled from the shock, and the stormers were repulsed with terrible slaughter. Then the Ghoorkas were brought forward, and these brave little men, in their dark green uniforms, were soon seen running over the intervening space strewn with dead until they reached the foot of the rampart. There, however, they met with a check, for the scarp was so high that they could not climb up; and, meanwhile, a dreadful fire issued from its summit, under which the crowd at its foot fell fast. At length, a *little Ghoorka*, lifted upon the shoulders of a huge grenadier of the 10th, who had rushed on again along with them, was the first who got into an embrasure. Speedily a

desperate conflict ensued around him, the Sikhs striving to bayonet those who came pressing up to protect him, the British to shelter their gallant leader. At last the latter prevailed, a portion of the works was carried, and the whole division, headed by the gallant Stacey, came pouring rapidly in, followed by Wilkinson with his men, and both brigades were soon engaged in a desperate close fight with the enemy in the interior of their works.

No sooner did the Sikh generals see this advantage gained on the left, than they directed their whole force against the division which had thus penetrated into their intrenchments, and the danger was imminent that it would be crushed by superior numbers on the very ground which it had with such difficulty won. To meet this danger, Ashburnham's reserve brigade pushed on to Dick's support, Gilbert's division was hurried forward in the centre, Smith's division was directed against the right, and the fire from the whole artillery was redoubled. Long and desperate was the conflict, for the Sikhs fought with the utmost resolution; their gunners stood to their pieces to the last; and even when the British, at particular spots, had broken in through gaps opened by the artillery, their masses rushed on with undaunted valor and again and again expelled the stormers from the intrenchments. At length, the sappers on the left centre having cleared out openings in the works sufficiently wide to admit horsemen in single file, the 3d Queen's Dragoons, headed by Sir Joseph Thackwell, penetrated in, and, forming inside the works, galloped along, taking the batteries in the rear, and cutting down the gunners, who, with unconquerable valor, continued to the very last to discharge their pieces. Gough immediately sent in the whole divisions in the centre and right to support and follow up this advantage. Long and desperate, however, was the conflict within the works; the Sikhs fought with heroic resolution, refusing alike to give or receive quarter. And it was not till the entire British reserves had been brought into action that victory finally declared for them. Gradually the Sikh columns were forced back towards the bridge and fords in their rear; the fire from their rearmost ranks at first lessened, and at last altogether ceased; and the whole mass, abandoning their guns, rushed in a tumultuous body to the water's edge.

Sir Hugh Gough had anxiously looked for the arrival of the period when the rising of the Sutlej, by rendering impassable

the fords on either side of the bridge of boats, might enable him to attack the enemy in the hazardous predicament of having no line of retreat but a broad river traversed by a single narrow bridge in their rear. This immense advantage, the counterpart of that enjoyed by the Archduke Charles on the second day of the battle of Aspern, now seconded his efforts. During the night preceding the battle, and while it was raging, the Sutlej rose seven inches, and thus rendered the fords hardly passable for the foot soldiers. This circumstance drove the whole of the fugitives to the bridge, the entrance of which was soon choked up. The British horse-artillery advanced at the gallop to the edge of the river, and opened a tremendous fire of round shot and canister on the living mass of fugitives. So terrible was the slaughter that the victorious troops felt for the sufferers, and would have recoiled from continuing it had not the recollection of the cruelty with which the Sikhs had, in the commencement of the action, slaughtered the wounded British who fell into their hands steeled every heart of the conquerors against pity.

Such was the battle of Sobraon, in which it is difficult to decide whether to admire most the desperate valor of the conquered, or the heroic prowess of the conquerors. —ALISON.

ELECTRICITY.

WHAT electricity or the electric fluid is, no man knows. The earliest notion of it was obtained through amber, called by the Greeks electron, and by the Romans electrum. This substance was observed by the ancients to possess so curious a capacity that, by being rubbed, it became able to draw to itself, and to hold for a short while in suspension, any loose light substances, such as small pieces of feather, which happened to be in its vicinity. Many other substances, such as resins, gums, glass, sulphur, and silk, were in the course of time observed to possess the same capacity; and, in allusion to amber, were designated electrics. Their peculiar power—the power put into them by friction—was very long regarded as a mystery, an amusement, or a thing merely to be wondered at; but eventually, it was accumulated in large quantity, and found to emit crackling sounds and sparkling light, and to give off smart, instantaneous, energetic shocks; and then it was assumed to be a distinct, though obscure element, and called electricity.

The first thought of any consequence which occurred in connexion with it, was to use it for the cure of diseases. A particular kind of friction machine was constructed for obtaining quantities of it at will, and for pouring them upon invalids at a touch; and this acquired rapid, general, overtowering fame, as one of the grandest inventions ever known in the healing art,—but was so abused by quacks, and so enormously overestimated by physicians, that it soon became little more than a means of philosophic experiment. In this character, however, it led the way to amazing discoveries. The power obtained by it was easily proved to be got out of the ground; for when the machine stood on any substance which could not become electrically affected by friction, it was useless; and when standing on the ground, it always retained all its susceptibility. Either the crust of the earth, or perhaps the solid globe, was hence inferred to be one vast reservoir of electricity. A suspicion by and by arose that the air is full of it too, or, at least, that the lightning of thunder-storms, and the crackling, sparkling, energetic power of the electric machine, were the same thing; and this suspicion was traced on to truth, in a series of masterly experiments, by several distinguished philosophers of Europe; and, most of all, by the distinguished Franklin of America. Electricity henceforth was recognized as a grand agent in weather,—and particularly as the presiding power in thunder-storms, sultriness, outbursts of typhoon, and hurricane; and, in the course of later, manifold, and highly curious investigations, it came to be identified also—at least as to its essential characteristics, though under great differences of intensity and of some other characters—with several sorts of luminous appearances in the air, with the formation of hail-showers, with the occasional luminosity of fogs and snow, with the peculiar power of magnets, with the peculiar power of the galvanic pile of the voltaic battery, with certain energies of steam and gun-cotton, and other remarkable things or conditions of things, and with the subtle agencies over animal physiology and animal life which have obtained the designations of mesmerism, electro-biology, animal magnetism, and odyle.

Still no man can tell what electricity is. It may be a material fluid of the closest possible similarity, which a material thing can possess to an immaterial,—and therefore prodigiously versatile, prodigiously subtle, and without any appreciable weight; or it may be two such fluids most curiously related to each other, yet mutually repulsive, and rushing off to opposite poles. It may

be a substance or substances strictly peculiar; or it may be a primal element identical in some way with the matter of light and heat, and possibly also with the matter of some of those seemingly indecomposable things which chemists call elements. Or it may be not a fluid or substance, or primal element at all, but only a condition of something else so subtle and recondite as hitherto to have escaped all detection or recognition by man. Yet here is a wonder that, nevertheless, it displays itself to all eyes, and works magnificently and mightily as one of the sublimest powers of nature, and behaves according to laws of the most perfect precision, and not difficult to be ascertained, and is altogether as well known by its properties and effects as many of the grossest substances which lie thoroughly open to man's investigation. And another wonder is that, in spite of all diversities of character, it is essentially and absolutely the same in the crashing thunderbolt, the beauteous aurora, and the tiny machine-spark,—the same in the tornado, the magnet, and the dewdrop,—the same in shivering the lightning-rod, in playing on the mariner's compass, and in gliding along the telegraphic wire,—the same in creating a hail-storm, in producing an electrotype, in mesmerizing a man, and in convulsing a corpse.

—Rev. J. M. Wilson.

FUNERAL OF WELLINGTON.

(A.D. 1852.)

. . . . . .

Who is he that cometh, like an honor'd guest,
With banner and with music, with soldier and with priest,
With a nation weeping, and breaking on my rest?
Mighty seaman,* this is he
Was great by land, as thou by sea
Thine island loves thee well, thou famous man,
The greatest sailor since our world began.
Now, to the roll of muffled drums,
To thee the greatest soldier comes;
For this is he
Was great by land, as thou by sea!
His foes were thine; he kept us free;
O give him welcome, this is he,
Worthy of our gorgeous rites,
And worthy to be laid by thee;

* Nelson, whose body was buried in St. Paul's.

For this is England's greatest son,
He that gain'd a hundred fights,
Nor ever lost an English gun.
This he that far away,
Against the myriads of Assaye,
Clash'd with his fiery few, and won;
And underneath another sun,
Warring on a later day,
Round affrighted Lisbon drew
The treble works,* the vast designs
Of his labor'd rampart-lines;
Where he greatly stood at bay,
Whence he issued forth anew,
And ever great and greater grew;
Beating from the wasted vines
Back to France her banded swarms—
Back to France with countless blows,
Till o'er the hills her eagles flew,
Past the Pyrenean pines;
Follow'd up in valley and glen
With blow of bugle, clamor of men,
Roll of cannon, and clash of arms,
And England pouring on her foes.
Such a war had such a close.
Again the ravening eagle rose
In anger, wheel'd on Europe—shadowing wings,
And barking for the thrones of kings;
Till one that sought but Duty's iron crown,
On that loud Sabbath† shook the spoiler down.
A day of onsets of despair!
Dash'd on every rocky square,
Their surging charges foam'd themselves away.
Last, the Prussian trumpet blew;
Through the long tormented air,
Heaven flash'd a sudden jubilant ray,
And down we swept, and charged and overthrew.

. . . . . .

Remember him who led your hosts;
He bade you guard the sacred coasts.
Your cannons moulder on the seaward wall;
His voice is silent in your council hall
For ever, and, whatever tempests lour,
For ever silent; even if they broke in thunder,
Silent. Yet remember all
He spoke among you, and the Man who spoke;

* The lines of Torres Vedras.
† The battle of Waterloo was fought on Sabbath, 18th June 1815.

Who never sold the truth to serve the hour,
Nor palter'd with eternal God for power;
Who let the turbid streams of rumor flow
Through either babbling world of high and low;
Whose life was work, whose language rife
With rugged maxims hewn from life;
Who never spake against a foe;
Whose eighty winters freeze with one rebuke
All great self-seekers, trampling on the right.
Truth-teller was our England's Alfred named;
Truth-lover was our English Duke;
Whatever record leap to light,
He never shall be shamed.

. . . . . .

—Tennyson.

SCIENCE AND ART.

In the study of natural philosophy, chemistry, and natural history, a wide field of knowledge will be spread out before you, in which every fact you observe, and every truth you learn, will surprise and delight you. Creations of boundless extent, displaying unlimited power, matchless wisdom, and overflowing beneficence, will at every step surround you. The infinitely great and the infinitely little will compete for your admiration; and in contemplating the great scheme of creation which these inquiries present to your minds, you will not overlook the almost superhuman power by which it has been developed. Fixed upon the pedestal of his native earth, and with no other instrument but the eye and the hand, the genius of man has penetrated the dark and distant recesses of time and space. The finite has comprehended the infinite. The being of a day has pierced backwards into primeval time, deciphering the subterranean monuments, and inditing its chronicle of countless ages. In the rugged crust and shattered pavement of our globe he has detected those gigantic forces by which our seas and continents have changed places—by which our mountain ranges have emerged from the bed of the ocean—by which the gold, and the silver, the coal, and the iron, and the lime have been thrown into the hands of man as the materials of civilization—and by which mighty cycles of animal and vegetable life have been embalmed and entombed.

In your astronomical studies, the earth on which you dwell will stand forth in space a suspended ball, taking its place as one of the smallest of the planets, and like them pursuing its appointed

path—the arbiter of times and seasons. Beyond our planetary system, now extended, by the discovery of Neptune, to three thousand millions of miles from the sun, and throughout the vast expanse of the universe, the telescope will exhibit to you new suns and systems of worlds, infinite in number and variety, sustaining, doubtless, myriads of living beings, and presenting new spheres for the exercise of divine power and beneficence. . . .

The advances which have recently been made in the mechanical and useful arts have already begun to influence our social condition, and must affect still more deeply our systems of education. The knowledge which used to constitute a scholar, and fit him for social and intellectual intercourse, will not avail him under the present ascendancy of practical science. New and gigantic inventions mark almost every passing year—the colossal tubular bridge, conveying the monster train over an arm of the sea—the submarine cable, carrying the pulse of speech beneath 2000 miles of ocean—the monster ship freighted with thousands of lives—and the huge rifle gun throwing its fatal and unchristian charge across miles of earth or of ocean. New arts, too, useful and ornamental, have sprung up luxuriantly around us. New powers of nature have been evoked, and man communicates with man across seas and continents with more certainty and speed than if he had been endowed with the velocity of the race-horse or provided with the pinions of the eagle. Wherever we are, in short, art and science surround us. They have given birth to new and lucrative professions. Whatever we purpose to do, they help us. In our houses they greet us with light and heat. When we travel we find them at every stage on land, and at every harbor on our shores. They stand beside our board by day, and beside our couch by night. To our thoughts they give the speed of lightning, and to our timepieces the punctuality of the sun; and though they cannot provide us with the boasted lever of Archimedes to move the earth, or indicate the spot upon which we must stand could we do it, they have put into our hands tools of matchless power by which we can study the remotest worlds; and they have furnished us with an intellectual plummet by which we can sound the depths of the earth, and count the cycles of its endurance. In his hour of presumption and ignorance man has tried to do more than this; but though he was not permitted to reach the heavens with his cloud-capt tower of stone, and has tried in vain to navigate the aerial ocean, it was given him to ascend into the empyrean by chains of thought which no light-

ning could fuse, and no comet strike; and though he has not been allowed to grasp with an arm of flesh the products of other worlds, or tread upon the pavement of gigantic planets, he has been enabled to scan with more than an eagle's eye, the mighty creations in the bosom of space—to march intellectually over the mosaics of sidereal systems, and to follow the adventurous Phæton in a chariot which can never be overturned.

—Brewster.

MARINER'S COMPASS.

THE LOADSTONE AND THE MAGNET.

The ancients were fully acquainted with the loadstone, and with its power of attracting iron, though they were totally ignorant of its polarity. That they were so, is evident from the fact that the classic authors and ancient works upon navigation and kindred subjects do not furnish one word upon the subject. Claudian has left, in one of his idyls, a long description of the stone, and of its peculiar, indeed magical, affinity for iron. Had he entertained the most distant idea that this stone would communicate to a steel needle the power of indicating the north, it is not to be

supposed for an instant that he would have omitted mentioning it. The earliest name of the loadstone was Hercules' Stone, which was soon changed to *magnes*, from the fact that it was found in abundance in a region called Magnesia, in Lydia. Hence our word magnet. It was not till the fourth century of our era that the quality of repelling as well as of attracting iron seems to have been discovered. Marcellus, the physician of Theodosius the Great, is the first author who mentions this new quality.

The Romans, who acquired a knowledge of the magnet from the Greeks, preserved the name, though several of their authors, and Pliny among them, mention a tradition that the magnet was so called from a shepherd named Magnes, who was the first to discover a mine of loadstone, by the nails in his shoes clinging to the metal.

The first mention in European history of the polarity of the magnetized needle, and of its importance to mariners, occurs in a satirical French poem written in 1190 by one Guyot de Provins. It may be very properly inferred, from the fact that the poet does not merely allude to the compass, but describes it and the polar star at some length, that it was not generally known, and, in fact, had been lately introduced into the Mediterranean. Whence it had been introduced there, we shall learn as we proceed.

The second historical mention of the compass occurs in a description of Palestine by Cardinal Jacques de Vitry, in the year 1218, in which is the following passage:—"The loadstone is found in India, to which, from some hidden cause, iron spontaneously attaches itself. The moment an iron needle is touched by this stone, it at once points towards the north star, which, though the other stars revolve, is fixed as if it were the axis of the firmament: from whence it has become necessary to those who navigate the seas."

Brunetto Latini, a grammarian of Florence, and preceptor of Dante, settled in Paris about the year 1260, and composed a work entitled the "Treasure," in which he distinctly describes the process and the consequence of magnetizing a needle. He also went to England, and in a letter, of which fragments have been published, writes thus:—"Friar Bacon showed me a magnet, an ugly and black stone, to which iron doth willingly cling: you rub a needle upon it, the which needle, being placed upon a point, remains suspended and turns against the star, even

though the night be stormy and neither star nor moon be seen; and thus the mariner is guided on his way."

The Italian Jesuit Riccioli, in his work upon geography and hydrography, states, that before 1270, the French mariners used "a magnetized needle, which they kept floating in a small vessel of water, supported on two tubes, so as not to sink."

All these authors agree in fixing the period at which the use of the needle was popularized in Europe, at the latter part of the twelfth and the commencement of the thirteenth century. Not one of them mentions the inventor by name, or even indicates his nation. This circumstance leads to the conviction that it was unknown to them, and that consequently the inventor was not a European. The theory that the Europeans obtained it from the Arabians, and the Arabians from the Chinese, is supported by the following facts :—

A manuscript work written by an Arabian named Bailak, a native of Kibdjak, and entitled, "The Merchant's Guide in the Purchase of Stones," thus speaks of the loadstone in the year 1242 :—"Among the properties of the magnet, it is to be noticed that the captains who sail in the Syrian waters, when the night is dark, take a vessel of water, upon which they place a needle buried in the pith of a reed, and which thus floats upon the water. Then they take a loadstone as big as the palm of the hand, or even smaller. They hold it near the surface of the water, giving it a rotary motion until the needle turns upon the water : they then withdraw the stone suddenly, when the needle, with its two ends, points to the north and south. I saw this with my own eyes, on my voyage from Tripoli, in Syria, to Alexandria, in the year 640, [640 of the Hegira, 1240 A.D.] I heard it said that the captains in the Indian seas substitute for the needle and reed a hollow iron fish, magnetized, so that, when placed in the water, it points to the north with its head, and to the south with its tail. The reason that the fish swims, not sinks, is that metallic bodies, even the heaviest, float when hollow, and when they displace a quantity of water greater than their own weight."

It may be fairly inferred from this passage, that, at the time spoken of, (1240,) the practice was already of long standing in this quarter, and that the needle and its polarity had been long known and employed at sea. That is, the Arabs had become familiar with the loadstone in 1240, while Friar Bacon regarded it, in England, as a curiosity in 1260—twenty years afterwards.

The priority of the invention would seem to be thus incontestably proven for the Arabs. But we shall see speedily that it derived its origin from a region situated still farther to the east, and many centuries earlier.

A famous Chinese Dictionary, terminated in the year 121 of our era, thus defines the word magnet :—"The name of a stone which gives direction to a needle." This is quoted in numerous modern dictionaries. One published during the Tsin dynasty—that is, between 265 and 419, states that ships guided their course *to the south* by means of the magnet. The Chinese word for magnet—*tchi nan*—signifies, indicator of the south. It was natural for the Chinese, when they first saw a needle point both north and south, to take the Antarctic pole for the principal point of attraction, for with them the south had always been the first of the cardinal points—the emperor's throne and all the government edifices invariably being built to face the south. A Chinese work of authority, composed about the year 1000, contains this passage :—"Fortune-tellers rub the point of a needle with a loadstone to give it the power of indicating the south."

A medical natural history, published in China in 1112, speaks even of the variation of the needle,—a phenomenon first noticed in Europe by Christopher Columbus in 1492. "When," it says, "a point of iron is touched by a loadstone, it receives the power of indicating the south : still, it declines towards the east, and does not point exactly to the south." This observation, made at the beginning of the twelfth century, was confirmed by magnetic experiments made at Pekin, in 1780, by a Frenchman ; only the latter, finding the variation to be from the north, set it down as from 2° to 2° 30′ to the west, while the Chinese, persisting in calling it a variation from the south, set it down as being from 2° to 2° 30′ to the east.

Thus, the Chinese, who were acquainted with the polarity of a magnetized needle as early as the year 121, and who noticed the variation in 1112, may be safely supposed to have employed it at sea in the long voyages which they made in the seventh and eighth centuries, the route of which has come down to us. Their vessels sailed from Canton, through the Straits of Malacca, to the Malabar coast, to the mouths of the Indus and the Euphrates. It is difficult to believe that, aware of the use to which the needle might be applied, they did not so apply it.

While thus claiming for the Chinese the first knowledge and application of the polarity of the needle, we may say, incidentally,

that it is now certain that they made numerous other discoveries of importance long before the Europeans. They knew the attractive power of amber in the first century of our era, and a Chinese author said, in 324, "The magnet attracts iron, and amber attracts mustard-seed." They ascribed the tides to the influence of the moon in the ninth century. Printing was invented in China about the year 920; and gunpowder would seem to have been made there long before Berthold Schwartz mixed it in 1330. Still, it is not necessary to resort to the argument of analogy to support the claims of the Chinese to this admirable invention: the direct evidence is sufficient.

A century ago, Flavio Gioja, a captain or pilot of Amalfi, in the kingdom of Naples, was recognized throughout Europe as the true inventor of the compass. He lived in the beginning of the fourteenth century, and biographers have even fixed the date of the memorable invention at the year 1303. The principal foundation for this assertion was the following line from a poem by Antonio of Bologna, who lived but a short time after Gioja:—

"Prima dedit nautis usam magnetis Amalphis."
(Amalfi first gave to sailors the use of the magnet.)

The tradition was subsequently confirmed by the statement made by authors of repute, that the city of Amalfi, in order to commemorate an invention of so much importance, assumed a compass for its coat-of-arms. This was believed till the year 1810, when the coat-of-arms for Amalfi was found in the library at Naples. It did not answer at all to the description given of it; instead of the eight wings which were said to represent the four cardinal points and their divisions, it had but two, in which no resemblance to a compass could be traced. Later investigations have, as we have said, completely demolished all the arguments by which the compass was maintained to be of European origin and of modern date. The curious reader will find the extracts from Chinese works which substantiate the Chinese claim, in a volume published in 1834, at Paris, by M. J. Klaproth, and composed at the request of Baron Humboldt.

No mention whatever is extant of the first venture made upon the Atlantic under the auspices of this mysterious but unerring guide. Science and history must for ever regret that the first European navigator who employed it did not leave a record of the

experiment. What would be more interesting to-day than the log of the earliest voyage thus accomplished in European waters? The modern reader would surely give his sympathy, unreservedly, to a narrative in which the navigator should describe his wonder, his terror, his joy, when, throughout the voyage, he saw the tremulous index point invariably north; when, upon the dispersion of the clouds which had concealed the star from view, it was found precisely where the needle indicated; when, upon its being diverted from the line of direction by some curious and perhaps incredulous experimenter, it slowly but surely returned, remaining fixed and constant through storms and calm, at midnight and at noon. What would be more interesting than the speculations of such a captain upon the cause of the marvellous dispensation? And what more amusing than the commentaries of the forecastle, and the learned explanation of the veteran salts to the raw recruits? But all this absorbing lore has hopelessly disappeared, and the mariner's compass will for ever remain mysterious in its principle, mysterious in its origin, mysterious in its history. —GOODRICH'S *The Sea.*

THE FUTURE OF AMERICA.

LET us not forget the religious character of our origin. Our fathers were brought hither by their high veneration for the Christian religion. They journeyed in its light, and labored in its hope. They sought to incorporate its principles with the elements of their society, and to diffuse its influence through all their institutions, civil, political, and literary. Let us cherish these sentiments, and extend their influence still more widely; in the full conviction that that is the happiest society which partakes in the highest degree of the mild and peaceable spirit of Christianity.

The hours of this day are rapidly flying, and this occasion will soon be passed. Neither we nor our children can expect to behold its return. They are in the distant regions of futurity, they exist only in the all-creating power of God, who shall stand here, a hundred years hence, to trace, through us, their descent from the pilgrims, and to survey, as we have now surveyed, the progress of their country during the lapse of a century. We would anticipate their concurrence with us in our sentiments of deep regard for our common ancestors. We would anticipate

and partake the pleasure with which they will then recount the steps of New England's advancement. On the morning of that day, although it will not disturb us in our repose, the voice of acclamation and gratitude, commencing on the rock of Plymouth, shall be transmitted through millions of the sons of the pilgrims, till it lose itself in the murmurs of the Pacific seas.

We would leave, for the consideration of those who shall then occupy our places, some proof that we hold the blessings transmitted from our fathers in just estimation; some proof of our attachment to the cause of good government, and of civil and religious liberty; some proof of a sincere and ardent desire to promote everything which may enlarge the understandings and improve the hearts of men. And when, from the long distance of a hundred years, they shall look back upon us, they shall know, at least, that we possessed affections, which, running backward, and warming with gratitude for what our ancestors have done for our happiness, run forward also to our posterity, and meet them with cordial salutation, ere yet they have arrived on the shore of Being.

Advance, then, ye future generations! We would hail you as you rise in your long succession to fill the places which we now fill, and to taste the blessings of existence where we are passing, and soon shall have passed, our human duration. We bid you welcome to this pleasant land of the fathers. We bid you welcome to the healthful skies and the verdant fields of New England. We greet your accession to the great inheritance which we have enjoyed. We welcome you to the blessings of good government and religious liberty. We welcome you to the treasures of science and the delights of learning. We welcome you to the transcendent sweets of domestic life, to the happiness of kindred and parents and children. We welcome you to the immeasurable blessings of rational existence, the immortal hope of Christianity, and the light of everlasting Truth!

—WEBSTER.

FAREWELL ADDRESS TO THE SENATE.

FROM 1806, the period of my entrance upon this noble theatre, with short intervals to the present time, I have been engaged in the public councils at home or abroad. Of the services rendered during that long and arduous period of my life, it does not become me to speak; history, if she deign to

notice me, and posterity, if the recollection of my humble actions shall be transmitted to posterity, are the best, the truest, and the most impartial judges. When death has closed the scene, their sentence will be pronounced, and to that I commit myself.

During that long period, however, I have not escaped the fate of other public men, nor failed to incur censure and detraction of the bitterest, most unrelenting, and most malignant character; and, though not always insensible to the pain it was meant to inflict, I have borne it, in general, with composure, and without disturbance, waiting, as I have done, in perfect and undoubting confidence, for the ultimate triumph of justice and of truth, and in the entire persuasion that time would settle all things as they should be, and that, whatever wrong or injustice I might experience at the hands of man, He to whom all hearts are open and fully known, would, by the inscrutable dispensations of His providence, rectify all error, redress all wrong, and cause ample justice to be done.

But I have not, meanwhile, been unsustained. Everywhere throughout the extent of this great continent, I have had cordial, warm-hearted, faithful, and devoted friends, who have known me, loved me, and appreciated my motives. To them, if language were capable of fully expressing my acknowledgments, I would now offer all the return I have the power to make for their genuine, disinterested, and persevering fidelity and devoted attachment, the feelings and sentiments of a heart overflowing with never-ceasing gratitude. If, however, I fail in suitable language to express my gratitude to *them* for all the kindness they have shown me, what shall I say, what *can* I say at all commensurate with those feelings of gratitude with which I have been inspired by the State whose humble representative and servant I have been in this chamber?

I emigrated from Virginia to the state of Kentucky, now, nearly forty-five years ago; I went as an orphan boy who had not yet attained the age of majority; who had never recognized a father's smile, nor felt his warm caresses; poor, penniless, without the favor of the great, with an imperfect and neglected education, hardly sufficient for the ordinary business and common pursuits of life; but scarce had I set my foot upon her generous soil, when I was embraced with parental fondness, caressed as though I had been a favorite child, and patronized with liberal and unbounded munificence.

From that period the highest honors of the State have been

freely bestowed upon me; and when, in the darkest hour of calumny and detraction, I seemed to be assailed by all the rest of the world, she interposed her broad and impenetrable shield, repelled the poisoned shafts that were aimed for my destruction, and vindicated my good name from every malignant and unfounded aspersion. I return with indescribable pleasure to linger a while longer, and mingle with the warm-hearted and whole-souled people of that state; and when the last scene shall for ever close upon me, I hope that my earthly remains will be laid under her green sod with those of her gallant and patriotic sons.

In the course of a long and arduous public service, especially during the last eleven years in which I have held a seat in the Senate, from the same ardor and enthusiasm of character, I have no doubt, in the heat of debate, and in an honest endeavor to maintain my opinions against adverse opinions alike honestly entertained, as to the best course to be adopted for the public welfare, I may have often inadvertently and unintentionally, in moments of excited debate, made use of language that has been offensive, and susceptible of injurious interpretation, toward my brother senators. If there be any here who retain wounded feelings of injury or dissatisfaction, produced on such occasions, I beg to assure them that I now offer the most ample apology for any departure on my part from the established rules of parliamentary decorum and courtesy. On the other hand, I assure senators, one and all, without exception and without reserve, that I retire from this chamber without carrying with me a single feeling of resentment or dissatisfaction to the Senate or any of its members.

I go from this place under the hope that we shall mutually consign to perpetual oblivion whatever personal collisions may, at any time, unfortunately have occurred between us; and that our recollections shall dwell in future only on those conflicts of mind with mind, those intellectual struggles, those noble exhibitions of the powers of logic, argument, and eloquence, honorable to the Senate and to the nation, in which each has sought and contended for what he deemed the best mode of accomplishing one common object, the interest and the best happiness of our beloved country. To these thrilling and delightful scenes it will be my pleasure and my pride to look back, on my retirement, with unmeasured satisfaction. —HENRY CLAY.

CIRCULATION OF THE BLOOD.

THE manner in which the blood-vessels are disposed in the human body bears some resemblance to the arrangement of the pipes by which a great city is supplied with water. London is supplied by means of an engine contrived for the purpose of distributing the water of the New River through the city. Large trunks are carried from this machine in different directions; smaller pipes branch out from these trunks into streets, lanes, and alleys; still smaller ones issue from them, and convey the water into private houses. So far the resemblance is complete. These water-pipes represent the *arteries* which carry the blood from the heart to the extremities of the body; but in the human body another contrivance was necessary. The citizens of London may use the water or waste it as they please; but the precious fluid conveyed by the arteries to the ends of the fingers must be returned to the heart; for on its unceasing circulation our health depends.

In order to effect this purpose, another set of pipes is prepared, called *veins*, which, joining the extremities of the arteries, receive the blood from them, and carry it back again to the heart. The veins present the same general appearance as the arteries; but as it is the office of the arteries to distribute the blood, so it is that of the veins to collect it. Through them it flows back to the heart in a manner just the reverse of that in which it sets out; the minute veins unite in larger branches, the larger branches in still larger trunks, till the collected blood is at length poured into the heart through one opening.

The engine that works this curious machinery is the *heart*. The heart is composed of four cavities. Like other muscles, it has the power of contracting; and when it contracts, the sides of its cavities are squeezed together, so as to force out any fluid the heart may at that moment contain. This purpose being effected, the fibres relax, the heart once more becomes hollow, and as it dilates, the blood pours into the cavities from the large veins which bring it back to the heart. The next contraction forces the blood into the arteries, the quantity thus impelled being always equal to that which has just been received; and thus this wonderful organ goes on, alternately contracting and dilating itself, *four thousand* times in an hour. Month after month, year after year, it goes on without weariness or interruption, conveying renewed strength to every part of the body. The two largest

cavities of the heart, which send out the blood to the arteries, are called *ventricles;* the two smallest, which receive it from the veins, *auricles.* All the arteries are furnished with valves that play easily forward, but admit not the blood to return to the heart.

In all this there is abundant evidence of wise contrivance. The blood, in going out from the heart, is continually passing from wide tubes into those which are narrower; in coming back, it passes from narrow vessels into wider; consequently presses the sides of the arteries with greater force than it acts against the coats of the veins. To prevent any danger from this difference of pressure, the arteries are formed of much tougher and stronger materials than the veins. This is one difference between the two; there is another still more strikingly illustrative of the care of the Great Artificer. As a wound in the arteries, through which the blood passes with such force from the heart, would be more dangerous than a wound in the veins, the arteries are defended, not only by their stronger texture, but by their more sheltered situation. They are deeply buried among the muscles, or they creep along grooves made for them in the bones. The under side of the ribs is sloped and furrowed, to allow these important tubes to pass along in safety; and in the fingers, which are liable to so many casualties, the bones are hollowed out in the inside like a scoop. Along this channel the artery runs in such security, that you might cut your finger across to the bone without doing it any injury.

—Mrs. Hack.

THE SUN.

The first step towards ascertaining the real size of the sun is to determine its distance. Now, the simplest way to find the distance of an object which cannot be got at, is to measure what is called a base line from the two ends of which it can be seen at one and the same moment, and then to measure with proper instruments the angles at the base of the triangle, formed by the distant object and the two ends of the base. Geography and surveying in modern times have arrived at such perfection, that we know the size and form of the earth we stand upon to an extreme nicety. It is a globe a little flattened in the direction of the poles,—the longer diameter, that across the equator, being

7,925 miles and five furlongs, and the shorter, or polar axis, 7,899 miles, and one furlong; and in these measures it is pretty certain that there is not an error of a quarter of a mile. And knowing this, it is possible to calculate, with quite as much exactness as if it could be measured, the distance *in a straight line* between any two places whose geographical positions on the earth's surface are known. Now there are two astronomical observatories very remote from one another; the one in the northern hemisphere, the other in the southern—viz., at Hammerfest in Norway, and at the Cape of Good Hope; both very nearly in the same meridian, so that the sun, or the moon, or any other heavenly body, attains its greatest altitude above the horizon of each (or, as astronomers express it, passes the meridian each) very nearly at the same time. Supposing, then, that this, its *meridian altitude* is carefully observed at each of these two stations on the same day, it is easy to find by computation the angles included between each of the two lines of direction in which it was seen from the two places and their common line of junction; so that taking this latter line for the base of a triangle, of which the two sides are the distances of the object from either place, those two sides can thence be calculated by the very same process of computation which is employed in geographical surveying to find the distance of a signal from observations at the ends of a measured base. Now, the distance between Hammerfest and the Cape in a straight line is nearly 6,300 miles, and owing to the situations of the two places in latitude, the triangle in question is always what a land surveyor would call a favorable one for calculation; so that, with so long a base, we may reasonably expect to arrive at a considerably exact knowledge of its sides, after which a little additional calculation will readily enable us to conclude the distance of the object observed from the earth's centre.

When the moon is the object observed, this expectation is found to be justified. The triangle in question, though a long one, is not extravagantly so. Its sides are found to be each about thirty-eight times the length of the base, and the resulting distance of the moon from the earth's centre, about thirty diameters of the latter, or more exactly sixty times and a quarter its radius, that is to say, 238,100 (say 240,000) miles, which is rather under a quarter of a million—so that, speaking roughly, we may consider the moon's orbit round the earth as a circle about half a million of miles across. In the case of the sun,

however, it is otherwise. The sides of our triangle are here what may be called extravagantly out of proportion to its base; and the result of the calculation is found to assign to the sun a distance very little short of four hundred times that already found for the moon—being in effect no less than 23,984 (in round numbers 24,000) radii, or 12,000 diameters of the earth, or in miles, 94,880,700, or about 95,000,000.

When so vast a disproportion exists between the distance of an object and the base employed to measure it, a very trifling error in the measured angles produces a great one in the result. Happily, however, there exists another, and a very much more precise method, though far more refined in principle, by which this most important element can be determined—viz., by observations of the planet Venus, at the time of its "transit" (or visible passage) across the sun's disc. It would lead us too far aside from our purpose to explain this, however, at length. The necessary observations were made at the time of the last transit in 1769, and will no doubt be repeated on the next occasion of the same kind, in 1874. From the distance of the sun so obtained, and from its apparent size, (or, as astronomers call it, its angular diameter,) measured very nicely by delicate instruments called micrometers, the real diameter of the sun has been calculated at 882,000 miles, which, I suppose, may be taken as exact to a few odd thousands.

Now, only let us pause a little and consider among what sort of magnitudes we are landed. It runs glibly over the tongue to talk of a distance of 95,000,000 of miles, and a globe of 880,000 miles in diameter; but such numbers hardly convey any distinct notion to the mind. Let us see what kind of conception we can get of them in other ways. And first, then, as to the distance. By railway, at an average rate of forty miles an hour, one might travel round the world in twenty-six days and nights. At the same rate it would take 270 years and more to get to the sun. The ball of an Armstrong 100-pounder leaves the gun with a speed of about 400 yards per second. Well, at the same rate of transit it would be more than thirteen years and a quarter in its journey to reach the sun; and the sound of the explosion (supposing it conveyed through the interval with the same speed that sound travels in our air) would not arrive until half a year later. The velocity of sound, or of any other impulse conveyed along a steel bar, is about sixteen times greater than in air. Now, suppose the sun and the earth connected by a steel bar. A blow

struck at one end of the bar, or a pull applied to it, would not be delivered—would not begin to be felt—at the sun till after a lapse of 313 days. Even light, the speed of which is such that it would travel round the globe in less time than any bird takes to make a single stroke of his wing, requires seven minutes and a half to reach us from the sun. —SIR JOHN HERSCHEL.

HYMN BEFORE SUNRISE IN THE VALE OF CHAMOUNI.

HAST thou a charm to stay the morning star
In his steep course? So long he seems to pause
On thy bald, awful head, O sovran Blanc!
The Arve and Arveiron at thy base
Rave ceaselessly; but thou, most awful form!
Risest from forth thy silent sea of pines,
How silently! Around thee and above,
Deep is the air and dark, substantial, black,
An ebon mass; methinks thou piercest it,
As with a wedge! But when I look again,
It is thine own calm home, thy crystal shrine,
Thy habitation from eternity!
O dread and silent mount! I gazed upon thee,
Till thou, still present to the bodily sense,
Didst vanish from my thought; entranced in prayer,
I worshipp'd the Invisible alone.

Yet, like some sweet beguiling melody,
So sweet we know not we are listening to it,
Thou, the meanwhile, wast blending with my thought,
Yea, with my life and life's own secret joy,
Till the dilating soul, enrapt, transfused
Into the mighty vision passing—there,
As in her natural form swell'd vast to heaven!

Awake, my soul! not only passive praise
Thou owest! not alone these swelling tears,
Mute thanks, and secret ecstasy! Awake,
Voice of sweet song! Awake, my heart awake!
Green vales and icy cliffs, all join my hymn!

Thou first and chief, sole sovran of the vale!
Oh struggling with the darkness all the night,
And visited all night by troops of stars,
Or when they climb the sky or when they sink!
Companion of the morning star at dawn,

Thyself earth's rosy star, and of the dawn
Co-herald: wake, oh wake, and utter praise!
Who sank thy sunless pillars deep in earth?
Who fill'd thy countenance with rosy light?
Who made thee parent of perpetual streams?

And you, ye five wild torrents fiercely clad!
Who call'd you forth from night and utter death,
From dark and icy caverns call'd you forth,
Down those precipitous, black, jagged rocks,
For ever shatter'd, and the same for ever?
Who gave you your invulnerable life,
Your strength, your speed, your fury, and your joy,
Unceasing thunder and eternal foam?
And who commanded—and the silence came,
Here let the billows stiffen, and have rest?

Ye ice-falls! ye that from the mountain's brow
Adown enormous ravines slope amain—
Torrents, methinks, that heard a mighty voice,
And stopp'd at once amid their maddest plunge!
Motionless torrents! silent cataracts!
Who made you glorious as the gates of heaven
Beneath the keen full moon? Who bade the sun
Clothe you with rainbows? Who, with living flowers
Of loveliest hue, spread garlands at your feet?
God! let the torrents, like a shout of nations,
Answer! and let the ice-plains echo, God!
God! sing, ye meadow-streams, with gladsome voice!
Ye pine groves, with your soft and soul-like sounds!
And they, too, have a voice, yon piles of snow,
And in their perilous fall shall thunder, God!

—Coleridge.

BATTLE OF BALAKLAVA—CAVALRY CHARGE.

(A.D. 1854.)

The cavalry, who have been pursuing the Turks on the right, are coming up to the ridge beneath us, which conceals our cavalry from view. The heavy brigade in advance is drawn up in two lines. The first line consists of the Scots Greys and of their old companions in glory the Enniskillens; the second, of the 4th Royal Irish, of the 5th Dragoon Guards, and of the 1st Royal Dragoons. The Light Cavalry Brigade is on their left, in two lines also. The silence is oppressive; between the cannon bursts one can hear the champing of bits and the clink of sabres in the

valley below. The Russians on their left drew breath for a moment, and then in one grand line dashed at the Highlanders. The ground flies beneath their horses' feet; gathering speed at every stride, they dash on towards that *thin red streak topped with a line of steel.* The Turks fire a volley at eight hundred yards, and run. As the Russians come within six hundred yards, down goes that line of steel in front, and out rings a rolling volley of Minié musketry. The distance is too great; the Russians are not checked, but still sweep onward through the smoke, with the whole force of horse and man, here and there knocked over by the shot of our batteries above. With breathless suspense every one awaits the bursting of the wave upon the line of Gaelic rock; but ere they come within a hundred and fifty yards, another deadly volley flashes from the levelled rifle, and carries death and terror into the Russians. They wheel about, open files right and left, and fly back faster than they came. "Bravo, Highlanders! well done!" shout the excited spectators. But events thicken. The Highlanders and their splendid front are soon forgotten; men scarcely have a moment to think of this fact, that the 93d never altered their formation to receive that tide of horsemen. "No," said Sir Colin Campbell, "I did not think it worth while to form them even four deep!" The ordinary British line, two deep, was quite sufficient to repel the attack of these Muscovite cavaliers. Our eyes were, however, turned in a moment on our own cavalry. We saw Brigadier-General Scarlett ride along in front of his massive squadrons. The Russians—evidently *corps d'élite*—their light blue jackets embroidered with silver lace, were advancing on their left, at an easy gallop, towards the brow of the hill. A forest of lances glistened in their rear, and several squadrons of gray-coated dragoons moved up quickly to support them as they reached the summit. The instant they came in sight, the trumpets of our cavalry gave out the warning blast which told us all that in another moment we should see the shock of battle beneath our very eyes. Lord Raglan, all his staff and escort, and groups of officers, the Zouaves, French generals and officers, and bodies of French infantry on the height, were spectators of the scene, as though they were looking on the stage from the boxes of a theatre. Nearly every one dismounted and sat down, and not a word was said. The Russians advanced down the hill at a slow canter, which they changed to a trot, and at last nearly halted. Their first line was at least double the length of ours—it was three times as

deep. Behind them was a similar line, equally strong and compact. They evidently despised their insignificant-looking enemy: but their time was come. The trumpets rang out again through the valley, and the Greys and Enniskilleners went right at the centre of the Russian cavalry. The space between them was only a few hundred yards; it was scarce enough to let the horses "gather way," nor had the men quite space sufficient for the full play of their sword-arms. The Russian line brings forward each wing as our cavalry advance, and threatens to annihilate them as they pass on. Turning a little to their left so as to meet the Russian right, the Greys rush on with a cheer that thrills to every heart—the wild shout of the Enniskilleners rises through the air at the same instant. As lightning flashes through a cloud, the Greys and Enniskilleners pierced through the dark masses of Russians. The shock was but for a moment. There was a clash of steel and a light play of sword-blades in the air, and then the Greys and the red-coats disappear in the midst of the shaken and quivering columns. In another moment we see them emerging and dashing on with diminished numbers and in broken order against the second line, which is advancing against them as fast as it can, to retrieve the fortune of the charge. It was a terrible moment. "God help them! they are lost!" was the exclamation of more than one man, and the thought of many. With unabated fire, the noble hearts dashed at their enemy. It was a fight of heroes. The first line of Russians—which had been smashed utterly by our charge, and had fled off at one flank and towards the centre—were coming back to swallow up our handful of men. By sheer steel and sheer courage, Enniskillener and Scot were winning their desperate way right through the enemy's squadrons, and already gray horses and red-coats had appeared right at the rear of the second mass, when, with irresistible force, like a bolt from a bow, the 1st Royals, the 4th Dragoon Guards, and the 5th Dragoon Guards rushed at the remnants of the first line of the enemy, went through it as though it were made of pasteboard, and, dashing on the second body of Russians, as they were still disordered by the terrible assault of the Greys and their companions, put them to utter rout.

—W. H. Russell.

CHARGE OF THE LIGHT BRIGADE.

I.

Half a league, half a league,
Half a league onward,
All in the valley of death
Rode the six hundred.
"Forward the Light Brigade!
Charge for the guns," he said.
Into the valley of death
Rode the six hundred.

II.

"Forward the Light Brigade!"
Was there a man dismay'd?
Not though the soldier knew
Some one had blunder'd:
Theirs not to make reply,
Theirs not to reason why,
Theirs but to do and die.
Into the valley of death
Rode the six hundred.

III.

Cannon to right of them,
Cannon to left of them,
Cannon in front of them,
Volley'd and thunder'd;
Storm'd at with shot and shell,
Boldly they rode and well,
Into the jaws of death,
Into the mouth of hell
Rode the six hundred.

IV.

Flash'd all their sabres bare,
Flash'd as they turn'd in air,
Sabring the gunners there,
Charging an army, while
All the world wonder'd:
Plunged in the battery-smoke,
Right through the line they broke;
Cossack and Russian
Reel'd from the sabre-stroke
Shatter'd and sunder'd,
Then they rode back, but not—
Not the six hundred.

V.

Cannon to right of them,
Cannon to left of them,
Cannon behind them
Volley'd and thunder'd;
Storm'd at with shot and shell,
While horse and hero fell,
They that had fought so well
Came through the jaws of death,
Back from the mouth of hell,
All that was left of them;
Left of six hundred.

VI.

When can their glory fade?
Oh the wild charge they made!
All the world wonder'd.
Honour the charge they made!
Honour the Light Brigade,
Noble six hundred!

—Tennyson.

THE INSUFFICIENCY OF NATURAL THEOLOGY.

If we would deliver the truth of God's justice from these misapprehensions, whether wilful or accidental, what process, we ask you, lies at our disposal? It is quite useless to try abstract reasoning. The mind can evade it, and the heart has no concern with it. It will avail nothing to insist on the literal force of expression. The whole mischief lies in the questioning the

thorough putting into effect; in the doubting whether what is denounced shall be point by point inflicted. What then shall we do with this truth of God's justice? We reply, we must make it truth "as it is in Jesus." We send a man at once to the cross of Christ. We bid him gaze on the illustrious and mysterious victim, stooping beneath the amazing burden of human transgression. We ask him whether he thinks there was remission of penalty on behalf of Him, who, though clothed in humanity, was one with Deity; or that the vials of wrath were spoiled of any of their scalding drops, ere emptied on the surety of our alienated tribes? We ask him whether the agonies of the garden, and the terrors of the crucifixion, furnish not a sufficient and thrilling demonstration that God's justice, when it takes in hand the exaction of punishment, does the work thoroughly; so that no bolt is too ponderous to be driven into the soul, no offence too minute to be set down in the reckoning? And if, when the sword of justice awoke against the fellow of the Almighty, it returned not to the scabbard till bathed in the anguish of the sufferer; and if God's hatred of sin be so intense and overwhelming a thing, that ere transgressors could be received into favor, the eternal Son interposed, and humbled Himself so that angels drew back confounded, and endured vicariously such extremity of wretchedness that the earth reeled at the spectacle, and the heavens were darkened; why shall there, or can there, be harborage of the deceitful expectation, that if any one of us, the sons of the apostate, rush on the bosses of the buckler of the Lord, and make trial for himself of the justice of the Almighty, he shall not find that justice as strict in its works as it is stern in its words, prepared to deal out to him unsparingly and unflinchingly the fiery portion whose threatenings glare from the pages of Scripture? So then we may count it legitimate to maintain that the truth of God being a just God is appreciated truth, and effective truth, only in the degree that it is truth "as it is in Jesus:" and we add, consequently, new witness to the fact, that the definition of our text describes truth accurately under its influential and life-giving forms.

We may pursue much the same line of argument in reference to the truth of the love of God. We may confess that he who looks not at this attribute through the person and work of the Mediator, may obtain ideas of it which shall in certain respects be correct. And yet, after all, it would be hard to prove satisfactorily, by natural theology, that "God is love," (John iv. 8.)

There may be a kind of poetical or Arcadian divinity, drawn from the brightness of sunshine, and the rich enamel of flowers, and the deep dark blue of a sleeping lake. And taking the glowing landscape as their page of theology, men may sketch to themselves God unlimited in His benevolence. But when the sunshine is succeeded by the darkness, and the flowers are withered, and the waters wrought into madness, can they find in the wrath and devastation that assurance of God's love which they derived unhesitatingly from the calm and the beauty? The matter of fact we hold to be, that natural theology, at the best, is a system of uncertainties, a balancing of opposites. I should draw different conclusions from the genial breathings of one day and the desolating simoom of the next. And though, when I had thrown me down on an Alpine summit, and looked forth on the clusterings of the grand and the lovely, canopied with an azure that was full of glory, a hope that my Creator loved me might be gathered from scenery teeming with impresses of kindness, and apparently sending out from waving forests, and gushing fountains, and smiling villages, the anthem of an acknowledgment that God is infinitely beneficent; yet if, on a sudden, there passed around me the rushings of the hurricane, and there came up from the valleys the shrieks of an affrighted peasantry, and the torrents went down in their strength, sweeping away the labor of man's hands, and the corn and the wood which had crowned the fields as a diadem; oh, the confidence which had been given me by an exhibition which appeared eloquent of the benevolence of the Godhead, would yield to horror and trepidation, whilst the Eternal One seemed walking before me, the tempest His voice, and the lightning His glance, and a fierce devastation in His every footprint. —MELVILLE.

THE LAW OF NATURE AND NATIONS.

THE science which teaches the rights and duties of men and of states has, in modern times, been called "the law of nature and nations." Under this comprehensive title are included the rules of morality as they prescribe the conduct of private men towards each other in all the various relations of human life; as they regulate both the obedience of citizens to the laws and the authority of the magistrate in forming laws and administering government; and as they modify the intercourse of independent

commonwealths in peace, and prescribe limits to their hostility in war. This important science comprehends only that part of private ethics which is capable of being reduced to fixed and general rules. It considers only those general principles of jurisprudence and politics which the wisdom of the lawgiver adapts to the peculiar situation of his own country, and which the skill of the statesman applies to the more fluctuating and infinitely varying circumstances which affect its immediate welfare and safety. "For there are in nature certain founts of justice whence al civil laws are derived, but as streams; and like as waters do take tinctures and tastes from the soils through which they run, so do civil laws vary according to the regions and governments where they are planted, though they proceed from the same fountains." *

On the great questions of morality, of politics, and of municipal law, it is the object of this science to deliver only those fundamental truths of which the particular application is as extensive as the whole private and public conduct of men:—to discover those "fountains of justice" without pursuing the "streams" through the endless variety of their course. But another part of the subject is to be treated with greater fulness and minuteness of application; namely, that important branch of it which professes to regulate the relations and intercourse of states, and more especially (both on account of their greater perfection and their more immediate reference to use) the regulations of that intercourse as they are modified by the usages of the civilized nations of Christendom. Here this science no longer rests on general principles. That province of it which we now call the "law of nations," has, in many of its parts, acquired among European ones much of the precision and certainty of positive law; and the particulars of that law are chiefly to be found in the works of those writers who have treated of the science of which I now speak. It is because they have classed, in a manner which seems peculiar to modern times, the duties of individuals with those of nations, and established their obligations on similar grounds, that the science has been called "the law of nature and nations." —MACKINTOSH.

* Bacon's "Advancement of Learning."

THE CITY OF KARS.

SURRENDER OF KARS.

(A.D. 1855.)

Nov. 25.—General Williams and his aide-de-camp, Teesdale, ride over under a flag of truce to the Russian camp. They are well received by Mouravieff. The general tells his chivalrous enemy that he has no wish to rob him of his laurels; the fortress contains a large train of artillery, with numerous standards and a variety of arms; but the army has not yet surrendered, nor will it without certain articles of capitulation. "If you grant not these," exclaimed the general, "every gun shall be burst, every standard burnt, every trophy destroyed, and you may then work your will on a famished crowd." "I have no wish," answered Mouravieff, "to wreak an unworthy vengeance on a gallant and long-suffering army, which has covered itself with glory, and only yields to famine. Look here," he exclaimed, pointing to a lump of bread and a handful of roots, "what splendid troops must these be who can stand to their arms in this severe climate on food such as this! General Williams, you have made yourself a name in history, and posterity will stand amazed at the endurance, the courage, and the discipline which this siege has called forth in the remains of an army. Let us arrange a capitulation that will satisfy the demands of war, without outraging

humanity." I leave my readers to imagine anything more touching than the interview between these gallant leaders, whose eyes were suffused with tears, while their hearts were big with sentiments of high honor and graceful benevolence.

The terms of capitulation arranged to-day to be laid before the Turkish officers were briefly as follows :—

"The officers and soldiers of the regular army were to pile arms in camp, and march out with their music and colors, and surrender themselves prisoners-of-war to the Russian army."

("And here," exclaimed General Mouravieff to the secretary, "write that, in admiration of the noble and devoted courage displayed by the army of Kars, the officers shall be allowed to retain their swords, as a mark of honor and respect.")

"All private property, the castle, mosques, and other public buildings are to be respected, and the inhabitants protected from pillage or insult. The militia, the Bashi-Bozooks are allowed to depart unarmed to their homes. The medical corps and other non-combatants are to be released, and be free to serve again in any other army. A certain number of foreign officers, and the subjects of states not at war with Russia, are to be allowed to depart, on condition of not serving again during the continuance of the war."

After a somewhat long interview with General Mouravieff, General Williams returns to the camp.

I am told that Selim Pasha could easily have advanced to our relief from Erzeroom, and that Major Stuart and the other British officers in that city did their utmost to impel him to march out, or at least to allow his troops to march with them. Nevertheless, I am inclined to believe that what would have been a daring, and probably successful, exploit with British troops, was all but hopeless with men who may be said to have been without officers, excepting a few gallant Englishmen, who were ignorant of their language, and who would have found them wholly unaccustomed to manœuvres in the field. Selim Pasha had not more, I believe, than 8000 troops; his cavalry, with which Major Cameron, Captain Peel, and Mr Evans offered to cut their way through the beleaguering force, were of the most inefficient description, and there was a corps of first-rate Russian troops on his right flank at Bayazid. Nevertheless, had it not been for the mendacious despatches of this Turkish general, we might have cut our way out of Kars through the enemy, after having destroyed our guns and standards, and while yet the

strength of our men allowed them to perform the feat. Selim Pasha might have awaited us in some good position. This plan was, I know, a favorite idea of General Williams, which he abandoned reluctantly when the desperate condition of his famished troops pointed out its impracticability. The constant despatches of Selim Pasha encouraged us to continue in our position to the utmost limits of human endurance; and added to our other miseries by practising upon us a heartless and ignoble deception.

The British Government did assuredly choose the very best man for the peculiar and trying duties that devolved upon General Williams. Under him each British officer felt it a pride and a pleasure to serve, while his peculiar knowledge and large experience of the Turkish character enabled him to detect and frustrate intrigues, to check peculation, and to stimulate Asiatic apathy; his many noble qualities endeared him to the soldiery, and made the people his enthusiastic partisans. No one can deny that he was truly "the right man in the right place."

—Dr. Sandwith.

ODE TO DUTY.

Stern daughter of the voice of God!
O duty! if that name thou love,
Who art a light to guide, a rod
To check the erring, and reprove—
Thou, who art victory and law,
When empty terrors overawe;
From vain temptations dost set free,
And calm'st the weary strife of frail humanity!

There are who ask not if thine eye
Be on them; who, in love and truth,
Where no misgiving is, rely
Upon the genial sense of youth:
Glad hearts! without reproach or blot,
Who do thy work and know it not;
Long may the kindly impulse last!
But thou, if they should totter, teach them to stand fast!

Serene will be our days and bright,
And happy will our nature be,
When love is an unerring light,
And joy its own security.
And they a blissful course may hold
Even now, who, not unwisely bold,
Live in the spirit of this creed,
Yet find that other strength, according to their need.

I, loving freedom, and untried,
No sport of every random gust,
Yet, being to myself a guide,
Too blindly have reposed my trust;
And oft, when in my heart was heard
Thy timely mandate, I deferr'd
The task, in smoother walks to stray;
But thee I now would serve more strictly if I may.

Through no disturbance of my soul,
Or strong compunction in me wrought,

I supplicate for thy control,
But in the quietness of thought;
Me this uncharter'd freedom tires;
I feel the weight of chance desires,
My hopes no more must change their name,
I long for a repose that ever is the same.

Stern lawgiver! yet thou dost wear [grace;
The Godhead's most benignant
Nor know we anything so fair
As is the smile upon thy face;
Flowers laugh before thee on their beds,
And fragrance in thy footing treads;
Thou dost preserve the stars from wrong;
And the most ancient heavens, through thee, are fresh and strong.

To humbler functions, awful power!
I call thee: I myself commend
Unto thy guidance from this hour;
Oh, let my weakness have an end!
Give unto me, made lowly wise,
The spirit of self-sacrifice;
The confidence of reason give;
And in the light of truth thy bondman let me live!

—WORDSWORTH.

CAUSES OF THE ESTABLISHMENT OF REPRESENTATIVE GOVERNMENT IN ENGLAND.

To nations, as well as individuals, sufferings are often of use; it may be that England owes her liberties to the Norman conquest. When between the fifth and seventh centuries the Goths invaded Spain, the Franks Gaul, and the Lombards Italy, what could be the result but anarchy and slavery? Wandering tribes, with no habit of social life, no laws, no restraints, falling upon a frightened degraded people—spiritless, downcast, who had almost ceased to be a people; of course the result was, that the conquered became slaves of the conquerors. But this was not the case in England when William conquered it, and transferred his empire there. Then it was one nation, (barbarous, it is true, but still a nation,) with habits of social life, laws and institutions, though rude and uncultivated, which subdued another nation, equally having laws and habits of its own, in many instances not dissimilar from those of their conquerors. Their primitive origin had been the same; therefore the conquest, though it brought many evils in its train, did not produce the entire dissolution of the two people, as it had done on the Continent, nor the permanent subjection of one race to the other. The forced approximation of the two races produced many reasons for fraternizing.

This circumstance, in my opinion, has not been fairly recognized by English historians. Naturally, a people detests owing anything

to that which, for a long time, was a source of unhappiness and mortification to it. But the oppression of the Normans has ceased for centuries; for many centuries both Saxons and Normans have alike disappeared, yet the remembrance of the twelfth century still exists, and can be traced at the present day in the opinions of the different parties. Tory writers pay little attention to the Anglo-Saxon institutions; Whigs, on the contrary, attach the utmost importance to them, and refer to them the origin of all their liberties. They say that, on the Continent, the feudal system was unable to produce one free government; and they attribute to the Normans what of despotism and feudality exists in their government, whilst they regard the Saxons as the authors of their rights and guarantees. This is not a correct view. It is true, Saxon institutions were the primitive cradle of English liberties; but there are good reasons for doubting if they alone, without the help of the conquest, would have been able to found a free government in England. The conquest brought forth a new character; political freedom was the result of the situation in which the two nations were placed towards each other. Looking at Anglo-Saxon institutions alone, and their results towards the middle of the eleventh century, we see nothing very different from those of other countries.

From the fifth to the eleventh century, there was in Great Britain, as in Gaul, a continued struggle between free, monarchical, and aristocratic institutions, and there is nothing to indicate the approaching triumph of free institutions; on the contrary, evident symptoms of their decline, as on the Continent. Their local institutions differed little from those of the Franks. The country was divided into tithings, hundreds, and counties, in each of which meetings were held and presided over by the tithingman, the chief of the hundred, and the earl or chief of the county, or by his deputy or sheriff. At these courts justice was administered, and all the civil transactions of the divisions were carried on there. These meetings, at first frequent, became by degrees more rare, till at last they had nearly disappeared. At the general county courts, which were never oftener than twice a year, all the freehold proprietors of the county were bound to attend, or pay the penalty, (a fine;) but the frequency and urgency of the summons proves how much they were neglected. It is therefore clear, that though the principle of free government—public deliberation—still existed, its vigor was much impaired.

However, aristocratic institutions, or the right of man over

man, was a system much less dangerous to English liberty than it was in France; but the germ of this evil still existed, and was developed in England as in France, by gradual encroachments on individual liberty. There is no doubt that in England, before the conquest, a great number of freemen lived under the protection of one great lord, whose jurisdiction over his domains was often almost sovereign, and superseded the legal tribunals. In the reign of Edward the Confessor royalty suffered much, and from the same causes under which it sank in France during the dynasty of the Carlovingians. The great vassals of the crown—Earl Godwin, Siward Duke of Northumberland, Leofric Duke of Mercia, and several others—were dangerous rivals of the king, and were on the point of converting their several domains, counties, and dukedoms into independent sovereignties. Harold, usurping the crown from Edgar Atheling, the rightful heir, resembles very nearly Hugh Capet. The sovereignty was evidently tending to dismemberment, the national unity to dissolution. The Witenagemote, or Champ de Mars of the Anglo-Saxons, had originally consisted of the freemen and warriors; but by degrees the new element, territorial influence, crept in, which gradually changed its character, till it became merely the general assembly of thanes or landed proprietors. These were again divided into the large proprietors, who from their strength and importance, or from being the companions and immediate vassals of the crown, were called royal thanes, and the lesser thanes. The former gradually became negligent about attending; confined themselves more and more to their own domains; trusting in their great strength, they refused to exercise it for the benefit of the public; and, in fact, exercised all the rights of petty sovereigns. Since the middle of the tenth century, the Witenagemote, after undergoing these successive changes, almost entirely disappeared. What is there in this different from the history of the Franks? Yet, notwithstanding these points of similarity, there were some essential differences, which led to different results. There was more unity in the population of Great Britain than in that of Gaul. The ancient inhabitants, the Britons, though perhaps not completely destroyed, were so entirely subjected that they were utterly unimportant. In a small compact kingdom like that of Great Britain, it was more difficult to shake existing institutions; in fact, most of the central establishments, such as county courts, corporations, &c., though much decayed and weakened, still preserved some little life and vigor

in the provinces, in the middle of the eleventh century. The feudal system, too, was not nearly as advanced or as matured as it was on the Continent. Nevertheless, I do not believe that these circumstances, though they might, and most probably would, have retarded the growth of aristocratic and monarchical principles, would have had strength entirely to check them, or to prevent the anarchy which would have been the result of the struggle. But the Norman conquest, by uniting the Anglo-Saxons more closely together, and by infusing more life into those laws and institutions which guaranteed freedom, put a check to this downward tendency. It gave more unity, more system, to both parties. After the conquest, the Normans, being a small, though strong body, encamped in an enemy's country, surrounded by people jealous of their independence, and waiting but for the opportunity to regain it, were forced, for their own safety, to cling closely together; consequently, they observed strict justice towards each other, they established laws to which they adhered religiously, and had no quarrels amongst themselves. All the struggles that there were, were between the conquerors and the conquered. This was far from being the case among the Gauls. There the former inhabitants had been so completely degraded, that they were almost entirely annihilated by the invasion of the barbarian hordes; so that the conquerors there might settle anywhere with impunity, far from their neighbors, and might be quite independent of those of their own race; which, after a time, led to so many independent dukedoms and sovereignties. In England, too, the conquerors did not seize land here and land there, as they fancied, but they always made a pretence of justice, and seized those which had been confiscated by the rebellion of their owners. The great aim William and all the Normans had in view, was to establish the supremacy of the Normans over the Saxons, and that of the royal power over the Normans. Nearly six hundred vassals took the oath of allegiance to him; and as if to guard against their future independence, particularly those whom he enriched most, he scattered their domains in different counties. The territory was divided into sixty fiefs, which were given to knights who took the oath of fidelity. The Doomsday Book, the statistics of the fiefs and their owners, begun in 1081 by William's orders, and finished in 1086, is an existing monument of the orders and cohesion of the Norman aristocracy, twenty years after its establishment in England.

These same causes, these same necessities, of course produced

analogous effects upon the Saxons. The spirit of nationality, which was beginning to die away before the conquest, revived under the weight of foreign oppression. It gave the whole population, a strong fierce race, one interest, one feeling, one object—that of expelling the conquerors. For this purpose they united and held closely together; to defend themselves, the Normans united and held equally firm among themselves. They had found in Normandy their rallying-point round the feudal system; the Saxons placed theirs in their ancient institutions and laws. William's government was not entirely, at least not in forms, one of force. After the Battle of Hastings, the throne was offered to him in the name of the Saxons, and before his coronation he swore to govern the two peoples by equal laws. Ever since his time, the Saxons have never ceased claiming as their right their ancient laws, the laws of Edward the Confessor, which at various times they have recovered from their Norman kings, when they rose strong enough to wrest anything from them. They defended and claimed their property in virtue of titles anterior to the conquest, and their titles were recognized. They met in the different courts of the county, receiving justice from their equals, and for the purpose of taking their common interests into consideration there. Thus we see that while on the Continent the conquest entirely destroyed both peoples, (the conquerors and the conquered,) in England, on the contrary, it only united each nation more firmly within itself in order to oppose the other. On the Continent, the government and all political laws had all perished together; in England they were more cherished than ever. On the Continent, all interests, aims, and objects were entirely individual; in England they were thoroughly national. On the Continent, the feudal system rose out of the destruction of the central power and political unity; in England it tended to preserve them. The Roman Gauls, except in a very few cities, had almost disappeared, or were in the lowest state of serfdom; the Saxons always maintained their position as a people, and reclaimed and vindicated their liberties in right of their ancient laws. In a word, in England, the conquest, instead of dispersing and confounding everything, brought into being two strong opposing forces, one endeavoring to gain dominion, the other resolutely defending their liberties. For each party, public deliberation and agreement was necessary—this is the principle of all free governments. —GUIZOT.

WHAT CONSTITUTES A STATE?

What constitutes a state?
Not high-raised battlement, or labor'd mound,
Thick wall, or moated gate;
Not cities proud, with spires and turrets crown'd;
Not bays and broad-arm'd ports,
Where, laughing at the storm, proud navies ride;
Not starr'd and spangled courts,
Where low-brow'd baseness wafts perfume to pride!
No! Men, high-minded men,
With powers as far above dull brutes endued,
In forest, brake, or den,
As beasts excel cold rocks and brambles rude;—
Men who their duties know,
But know their rights; and, knowing, dare maintain!

—Sir Wm. Jones.

THE ATLANTIC OCEAN AND THE TELEGRAPH.

The Atlantic Ocean stretches from the Arctic Circle on the north to the Antarctic Circle on the south, a distance of 9000 miles. Its breadth varies from 1200 miles between the coasts of Greenland and Norway, to 3500 miles from the peninsula of Florida to Cape Verde, on the western coast of Africa. Humboldt compares the bed of the Atlantic to a long, deep valley, which may be said to extend from pole to pole. The North Atlantic varies in depth from 6000 to 25,000 feet. The deepest part, says Lieutenant Maury is probably between the Bermudas and the Grand Banks of Newfoundland; but how deep it may be yet remains for the sounding line to determine. One result of recent measurements of the depth of the Atlantic by the British and American navies is, the certain knowledge we now possess that the bed of the ocean, like the land, is diversified by mountains and valleys, hills, table-lands, and plains.

Between Newfoundland and Ireland the bed of the Atlantic is so remarkably level, that it has received the name of the Telegraphic Plateau. In making soundings for the telegraphic cable across this plateau, various specimens of the bottom were brought up, by means of an apparatus attached to the sounding-line. These were submitted to the celebrated microscopist, Professor Ehrenberg, and were found to consist of minute shells, perfect in

PAYING OUT THE CABLE.

form, some of them quite fresh, and having the remains of the animal in them, showing that in this part of the Atlantic there are no currents to disturb the bottom of the sea. It is an established fact, indeed, that there is no running water at the bottom of the *deep* sea. The agents which disturb the equilibrium of the ocean, giving violence to its waves and force to its currents, all reside near or above its surface; none of them have their home in its depths.

Wherever specimens of the bottom have been obtained by the deep-sea plummet, they have been found to consist of minute microscopic shells. If the bottom were disturbed by currents, these minute shells would be found scratched, and their sharp corners and edges broken off and rounded. Moreóver, were they drifted about, sand and other scourings of the ocean would be mixed with them. But not so; the specimens brought up from the deep show no such mixture, and bear no marks of abrasion upon even their most delicate parts.

In these still and quiet waters at the bottom of the Atlantic it was decided to lay the telegraphic cable—the distance from land to land being about 1600 miles.

In the summer of 1857 the *Agamemnon* of the British navy and the *Niagara* of the American navy were assigned by their respective governments to the duty of receiving on board and laying the submarine Atlantic cable. After several unsuccessful attempts in 1857 and 1858, the vessels met in mid-ocean, joined cables, and set out, the *Niagara* for her terminus in Trinity Bay, Newfoundland, and the *Agamemnon* for hers in Valencia Harbour. On the 5th of August the cable was successfully landed on both shores; and a week afterwards, messages of congratulation were flashed across the ocean between the Queen of England and the President of the United States.

Though short-lived, it was a grand achievement. It demonstrated the possibility of uniting by telegraph the New World with the Old—an achievement destined yet to be one of the great events of the nineteenth century.*

Referring to this subject, a distinguished author thus writes:—

"Let me offer you two feebly-outlined word-pictures of events which were transacted on the same arena, at the interval of nearly four centuries. The epoch of the first is the autumn of 1492. The scene is the mid-Atlantic, and on its bosom floats the frail caravel of Columbus. It is midnight, and the astonished pilots are gazing with awe on the compass-needle, which has ceased to point to the North-star, and has veered round to the west; and they ask the great admiral what this unheard-of variation may mean. To him it is a mystery as well as to them, but he has an explanation which contents them; and for himself, however mysterious it may be, it is anew the finger of God bidding him sail westward still; and he follows its new pointing, till it lands him on the shore he has so often seen in his dreams.

"The time of the second picture is 1858. The scene, as before, is the mid-Atlantic, and on its bosom a great English steam-ship is silently gliding with every sail furled. It is midnight again, and the sailors, as in the caravel four centuries ago, are gazing with intense eyes upon a quivering needle. It is not now, however, a mere compass-needle; but, armed with a tiny mirror, it lies in the centre of a coil of wire looped to the great cable, which, as electric signals pass along it, is every moment bringing the Old and the New Worlds nearer each other in time. Every quiver to east and west that the needle makes, as the voltaic current sweeps round the coil, flashes from the mirror a spot of light on a screen, and marks a step in progress; and all watch

* And now (1867) successfully accomplished.

the face of the electrician, the Columbus of this voyage, to whom alone these spots of light are intelligible and eloquent of success. And so the mirrored, flashing galvanometer sways about, till the voyage ends; and then *Gloria in excelsis* is literally quivered in light, as it was by its first singers the angels, and in unconscious repetition of its chant by the kneeling crews of Columbus four centuries ago.

"Let us wish all success to the telegraph everywhere. The best interests of the world are bound up in its progress, and its mission is emphatically one of peace. It does not merely speak swiftly, but softly; and it offers men a common speech, in which all mankind can converse together.

"Men have spoken, men have dream'd,
Of a universal tongue;
Universal speech can be
Only when the words are sung,
When our harp has all its strings,
And its music fills the air,
In a universal tongue
All the world shall share."

—MAURY AND DR. G. WILSON.

GRAPPLING THE CABLE BY MOONLIGHT.

SCIENCE.

(*From a speech at Birmingham, in* 1855, *by the late Prince Consort.*)

No human pursuits make any material progress until science is brought to bear upon them. We have seen, accordingly, many of them slumber for centuries; but from the moment that science has touched them with her magic wand, they have sprung forward, and taken strides which amaze and almost awe the beholder. Look at the transformation which has gone on around us since the laws of gravitation, electricity, and the expansive power of heat have become known to us! It has altered our whole state

of existence—one might say the whole face of the globe! We owe this to science, and science alone; and she has other treasures in store for us, if we will but call her to our assistance. It is sometimes objected by the ignorant that science is uncertain and changeable; and they point to the many exploded theories which have been superseded by others, as a proof that the present knowledge may be also unsound, and, after all, not worth having. But they are not aware that while they think to cast blame upon science, they bestow, in fact, the highest praise upon her. For that is precisely the difference between science and prejudice: that the latter keeps stubbornly to its position, whether disproved or not; while the former is an unarrested movement toward the fountain of truth—caring little for cherished authorities or sentiments, but continually progressing—feeling no false shame at her shortcomings, but, on the contrary, the highest pleasure when freed from an error, at having advanced another step towards the attainment of divine truth, a pleasure not even intelligible to the pride of ignorance. We also hear, not unfrequently, science and practice—scientific knowledge and common sense—contrasted as antagonistic. A strange error! For science is eminently practical, and must be so, as she sees and knows what she is doing; while mere common practice is condemned to work in the dark, applying natural ingenuity to unknown powers to obtain a known result. Far be it from me to undervalue the creative power of genius, or to teach shrewd common sense as worthless without knowledge. But nobody will tell me that the same genius would not take an incomparably higher flight, if supported with all the means which knowledge can impart, or that common sense does not become, in fact, only truly powerful when in possession of the materials upon which judgment is to be exercised. The study of the laws by which the Almighty governs the universe is, therefore, our bounden duty. These laws are most important branches of knowledge—their study trains and elevates the mind. But they are not the only ones. There are others which we cannot disregard—which we cannot do without. There are, for instance, the laws governing the human mind and its relation to the Divine Spirit—the subject of logic and metaphysics. There are those which govern our bodily nature and its connexion with the soul—the subject of physiology and psychology. More which govern human society and the relations between man and man—the subjects of politics, jurisprudence, political economy, and many others.

While of the laws just mentioned, some have been recognized as essentials of education in different institutions; and some will, in the course of time, more fully assert their right to recognition. The laws regulating matter and form are those which will constitute the chief objects of your pursuits; and as the principle of subdivision of labour is the one most congenial to our age, I would advise you to keep to this specially, and to follow, with undivided attention, chiefly the sciences of mechanics, physics, and chemistry, and the fine arts in painting, sculpture, and architecture. But these divine laws are capable of being discovered and understood, and of being taught and made our own. This is the task of science; and while science discovers and teaches these laws, art teaches their application. No pursuit is, therefore, too insignificant not to be capable of becoming the subject both of a science and an art. The fine arts—as far as they relate to painting and sculpture, which are sometimes confounded with art in general—rest on the application of the laws of form and labor, and what may be called the science of the beautiful. They do not rest on any arbitrary theory on the modes of producing pleasurable emotions, but follow fixed laws, more difficult, perhaps, to seize than those regulating the material world, because belonging partly to the sphere of the ideal and our spiritual essence, yet perfectly appreciable and teachable, both abstractedly and historically, from the works of different ages and nations.

THE SOCIAL SCIENCES.

THE most important of all the sciences is that which professes to teach us the rules of right living. It shows us that we are placed in a state of society, not merely that we may provide for our own happiness, but also that we may promote the happiness of the whole. Certain relations, such as those of parent and child, brother and sister, magistrate and citizen, sovereign and subject, arise out of this social condition of our race. Each of these relationships has its appropriate duties. There is, moreover, one great relationship in which we stand to each other as fellow-beings, and a still greater, in which we are placed towards that Infinite Being, who created, and who preserves both them and us. That Infinite Being, whom we call God, has bestowed upon us five senses, by means of which we become conscious of the vast variety of objects and powers inhabiting the world we live in;

such are sight, smell, taste, hearing, and touch. But He has also conferred upon us an internal and invisible sense called *conscience*, by which we are enabled to judge of actions, whether performed by ourselves or by others. This power, conscience, at once informs us what actions are right and what wrong, just as the sight makes known to us the color, and touch the shape of objects. Conscience is universal—no nation or class of people is known that does not possess it to some extent; and hence all men are held accountable for any infraction of its laws or disregard of its precepts. How necessary is it, therefore, that a system of knowledge of this kind should be prepared, in order that men might learn from it what their duties are, and how they should be performed, in a clearer and fuller manner than the unassisted conscience teaches. The greatest system of the kind ever written is the Bible, whereby God himself condescends to teach man the true rules of right living. The name of the science which teaches the distinction between right and wrong in human action, and which investigates the character of the moral sense or conscience, is Ethics, from a Greek word meaning *pertaining to manners.* Since, however, we are placed in different relations towards our fellow-men in society, the science may be made to consist of several departments, such as the ethics of the family, of citizens, of states between themselves, and of the individual towards the whole human race. No science equalling that of ethics in importance has as yet come under our notice.

In every society there must of necessity be two classes of people, the rulers and the ruled. Thus, in the small society called a family, the parents are supreme; in a school, the master or mistress; in a city, the mayor and corporation exercise authority; in a province or subordinate state, the governor and legislature. The same holds good with larger societies, such as an empire, a kingdom, or a republic. It is not only necessary that the subjects or citizens, those who are governed, should be acquainted with their duties as taught by ethical science, but also that rulers should learn how to exercise their authority aright, and for the welfare of the community committed to their charge. It is their duty to devise the best plan of government, whether it be a despotism, as most empires and some kingdoms are, a limited monarchy like Great Britain, or a republic as the United States. They must provide for the government of the country in all its particulars, by different classes of officers, such as legislators to make laws, judges to expound and apply them,

and executive officers to carry them into effect. They must also protect those over whom they are set from violence and injury of every kind, by establishing police for internal safety, and military and naval forces to guard against danger from without. The manner of appointing these officers, the share which the people are to be allowed in the government of themselves, and all similar questions, are fully considered and discussed by the science of Politics, so called from a Greek word which signifies *pertaining to a state or city.*

The great end of society is to minister to the happiness of all the members composing it, by securing to them the rights and privileges to which they are entitled. One of these rights is that of *property.* By so doing, society encourages the accumulation of property by individuals. Sometimes this property is in the shape of land which the owner cultivates, thus providing himself with a supply of vegetable food, or cattle which he rears for animal food; or from both these sources he may draw materials for clothing, such as cotton and wool. The land also may contain valuable timber, mines of coal and metal, stone quarries, hunting-grounds or fisheries. The owners of such lands having much more grain, cattle, wood, coal, metal, &c., than they have any need for, will be glad to exchange them for other materials. From this arises a system of barter or exchange; afterwards money is made use of as a convenient medium to suit all parties, and thus trade is fairly established. Three classes of traders spring up; the owners of land who produce the raw materials, the manufacturers who prepare these materials for use, and the merchants who buy and sell the manufactured commodities. Each of these individuals makes a profit upon what he sells or exchanges, and according to the extent of his business and his own wisdom and foresight, he accumulates property either in land, money, or goods, which property is called *wealth.* Now, there is a science which deals with wealth, examining into the various schemes for promoting it, and fixing upon the best means of so doing. This science aims at the advancement of national wealth, which is of course built up of individual prosperity. It is its duty to show how a government can best promote the end in view, whether by encouraging certain classes, or by leaving all alone; it must deal with such questions as taxation, direct and indirect, as levied upon the income of the individual, or upon the goods he buys; and it must not neglect the moral and intellectual conditions of the people, since upon

these depends to a very great extent the prosperity of a country. It is the office of this science also to devise means for carrying off a superabundant population, and for peopling uninhabited lands; such are the schemes of emigration and colonization. These are some of the many objects of the science of Wealth or Political Economy, the latter word being derived from the Greek, and meaning *the law of the house* or *management*, since the term was first applied to the care exercised by a skilful and thrifty housewife over her domestic concerns.

There are two other subjects which are sometimes erected into separate sciences, but which may be fairly considered as included under ethics and politics; these are the law of nature and the law of nations. The law of nature is nothing more than the system of rights and obligations which God has granted to, and imposed upon each individual as a social, moral, intelligent being, and by which his conduct towards his fellow-men is to be shaped and judged. The law of nations deals with the relations between foreign countries in times of peace and war, and is frequently called international law. It is between nations what the law of nature is between individuals. All just legislation must be built upon the law of nature, which has its origin in Divine Wisdom.

All the sciences which in this and the four previous lessons have come under our notice belong, with the exception of pure mathematics and ethics, to the class called inductive. The word *inductive* means *leading into,* and is applied to those systems of knowledge which are built up from the observation and classification of facts, gradually ascending to general principles by means of these. Thus, by observing and examining all the stones I meet with, I form the conclusion that "no stones have life," which I could not have done had I not seen or felt stones, and known what they were. This is induction. But pure mathematics, ethics, and some other sciences which we have yet to consider, are called deductive, or *leading from;* because, instead of facts being given us in order to find the general rule, the rule is given that we may find the facts from it. Thus, "twice two are four" is a general principle, which is true for all objects whatever they may be; and from it we deduce the fact, that if on two separate occasions two apples fall from a tree, four will be the number comprehending them. I have said that nearly all the sciences to which I have thus far directed your attention are inductive. Of the three social sciences, two are inductive and

one deductive. The deductive science is ethics. By conscience and divine revelation we are furnished with general principles, and from these we deduce rules for daily conduct. But such is not the case with politics and political economy. These are built upon facts, which it is the duty of the politician and the economist to observe, compare, and make induction of general laws from. There is a separate science of recent date which deals altogether with the facts and figures upon which the two inductive social sciences are founded; this science is called Statistics. The term statistics is a barbarous one, being composed of a Latin word meaning *standing* or *condition*, and a Greek termination that signifies pertaining to. The object of the science is to collect facts of every kind relating to social life, such as births, marriages, deaths, health, disease, wealth, commerce, agriculture, military and other resources, government, crime, education, religion, and everything tending to show the physical, intellectual, moral, and social condition of any class of men, or of the whole human family.

These, then, constitute Social Science:—ethics, politics, political economy, and statistics. Some writers make the number of sciences more, others less, according to the point of view from which they regard them; these four are, however, sufficient, and yet not more than sufficient, to exhaust this important department. While it is the duty of every intelligent person to acquire some knowledge of the world in which he lives and of the history of his race, there is a still more imperative obligation laid upon all men to become acquainted with those systems of knowledge which so closely concern them as members of human societies.

Social Sciences.

1. Ethics.
2. Politics.
3. Political Economy.
4. Statistics.

—*Campbell's Sixth Reader.*

ON THE DIVISION OF LABOR.

The effects of the division of labor in the general business of society will be easily understood by taking an example from a very trifling manufacture—namely, the trade of a pin-maker. This business is divided into a number of branches, of which the greater part are peculiar trades. One man draws out the wire;

another straightens it; a third cuts it; a fourth points it; a fifth grinds it at the top for receiving the head; to make the head requires two or three distinct operations; to put it on is a distinct business; to whiten the pins is another; and it is even a separate trade to put them into the paper.

Pin-making being thus divided into distinct operations, a small manufactory consisting of ten persons, and but indifferently accommodated with the necessary machinery, can produce forty-eight thousand pins in a day. Each person may therefore be considered as making four thousand eight hundred pins in a day; but had they wrought separately and independently, the best workman among them could not have made twenty, and perhaps, not one, pin a day.

A great part of the machines made use of in manufactures in which labor is most subdivided were originally the inventions of common workmen, who, being each of them employed in some very simple operation, naturally turned their thoughts towards finding out easier and readier methods of performing it.

In the first steam-engines, a boy was constantly employed to open and shut alternately the communication between the boiler and the cylinder, according as the piston either ascended or descended. One of these boys, who loved to play with his companions, observed that by tying a string from the handle of the valve which opened this communication to another part of the machine, the valve would open and shut without his assistance, and leave him at liberty to divert himself with his playfellows. One of the greatest improvements that have been made upon this machine since it was first invented was in this manner the discovery of a boy, who wanted to save his own labor.

The woollen coat which covers the day-laborer, coarse and rough as it may appear, is the produce of the joint labor of a great multitude of workmen. The shepherd, the sorter of the wool, the wool-comber or carder, the dyer, the scribbler, the spinner, the weaver, the fuller, the dresser, with many others, must join their different arts to complete even this homely production.

How much commerce and navigation, how many shipbuilders, sailors, sailmakers, and ropemakers must have been employed in order to bring together the different drugs made use of by the dyer, which often come from the remotest corners of the world!

To say nothing of such complicated machines as the ship of the sailor, the mill of the fuller, or even the loom of the weaver,

let us consider only what a variety of labor is requisite in order to form that very simple machine, the shears with which the shepherd clips the wool. The miner, the builder of the furnace for smelting the ore, the feller of the timber, the burner of the charcoal to be made use of in the smelting-house, the brick-maker, the bricklayer, must all join their different arts in order to produce them.

Were we to examine in the same manner all the different parts of his dress and household furniture—the coarse linen shirt he wears; his shoes; the bed he lies on, and all the parts which compose it; the kitchen grate at which he prepares his victuals; the coals dug for that purpose from the bowels of the earth, and brought to him perhaps by a long sea and long land carriage; all the other utensils of the kitchen and furniture of his table; the different hands employed in preparing his bread and beer; the glass window which lets in the heat and the light, and keeps out the wind and the rain, with all the knowledge and art requisite for preparing that beautiful and happy invention;—if we examine all these things, and consider what a variety of labor is employed about each of them, we shall be sensible that, without the assistance and co-operation of many thousands, the very meanest person in a civilized country could not be provided, even according to what we very falsely imagine the easy and simple manner in which he is commonly accommodated.

—Adam Smith.

LABOR.

Ho! ye who at the anvil toil,
And strike the sounding blow,
Where from the burning iron's breast
The sparks fly to and fro,
While answering to the hammer's ring,
And fire's intenser glow—
Oh! while ye feel 'tis hard to toil
And sweat the long day through,
Remember it is harder still
To have no work to do.

Ho! ye who till the stubborn soil,
Whose hard hands guide the plough,
Who bend beneath the summer sun,
With burning cheek and brow—
Ye deem the curse still clings to earth
From olden time till now—

But while ye feel 'tis hard to toil
And labor all day through,
Remember it is harder still
To have no work to do.

Ho! ye who plough the sea's blue field—
Who ride the restless wave,
Beneath whose gallant vessel's keel
There lies a yawning grave,
Around whose bark the wintry winds
Like fiends of fury rave—
Oh! while ye feel 'tis hard to toil
And labor long hours through,
Remember it is harder still
To have no work to do.

Ho! ye upon whose fever'd cheeks
The hectic glow is bright,
Whose mental toil wears out the day
And half the weary night,
Who labor for the souls of men,
Champions of truth and right—
Although you feel your toil is hard,
Even with this glorious view,
Remember it is harder still
To have no work to do.

Ho! all who labor—all who strive—
Ye wield a lofty power:
Do with your might, do with your strength,
Fill every golden hour!
The glorious privilege to do
Is man's most noble dower.
Oh! to your birthright and yourselves
To your own souls be true!
A weary, wretched life is theirs
Who have no work to do.

—Caroline F. Orne.

INDUSTRY AND INTELLIGENCE.

A North American Indian is very indolent. While he has food enough in his cabin, he will lie for days together basking in the sun, and dozing away his existence; he does not go out to hunt again until he is forced away by the pressure of hunger. He then only procures enough for his present necessities, and relapses into his former indolent stupor.

One reason of this is the following. He does not know of any method in which, by labor, he can benefit his condition; he knows of no weapon better than his bow and arrows, and of no covering better than the skins of animals slain in the chase. Hence he has no motive for labor beyond that amount which will procure him these simple necessaries.

But let a benevolent man go into this tribe, and show them how great additional benefits would be secured by additional labor, and there would at once be created a motive for that labor. If the Indian found out that, by procuring thirty or forty beaver skins more than before, he could purchase a rifle, he would easily be persuaded to labor to procure them. If he knew that by some additional labor he could procure an axe or a saw, and the materials for a house, and plenty of blankets for his winter clothing, all these would be strong motives for laboring every year more and more assiduously.

Now, this change would all be the result of knowledge. The Indian knows more, and hence he is more industrious. Knowledge has opened his eyes to see what benefits he may secure by labor, and he now labors to secure them. But the case of the Indian is the case with every man. Just in proportion as men see the advantages which they may gain by industry, just in that proportion may we expect their industry to increase. Knowledge supplies motives to labor which did not exist in a state of ignorance: and just in proportion to the strength of these additional motives will be the increase of the labor to which they give rise.

But suppose a man have ever so strong a disposition to labor, he cannot labor unless he knows how; and suppose that he knows how to labor in a very imperfect manner, so that his remuneration be very small, he will labor with much less zeal than he would if he could labor skilfully, and thus, with the same amount of toil, procure a much larger share of the means of happiness.

Thus, suppose a man own a farm, and be perfectly aware of the comforts of life which he could procure by the produce of it, he would have motives sufficient to induce him to labor. But if he did not know anything about farming, he would still be in difficulty; for though he might desire the comforts which he might procure, and be willing to labor for them, he would, nevertheless, be destitute, for he would not know how to proceed.

Hence we see that it is very necessary to furnish all men with the

means of knowledge. The farmer ought to understand the nature of soils, of vegetables, of animals, the best modes of cultivation, the best and cheapest manures, and everything relating to his business. The mechanic should know everything about the material on which he labors; the tanner should understand the chemical principles on which tanning depends; the carpenter and house-builder should understand the principles of architecture; the manufacturer should understand everything relating to the machinery with which he works; the merchant should be well acquainted with the natural history of the articles in which he traffics, the mode of their production, the best places from which they can be procured, and the best articles which he can send in exchange for them.

Besides this, every one of these persons ought to be able to write a good hand, and to keep accounts skilfully, accurately, and neatly. By means of this knowledge a man is able to communicate his thoughts and wishes to persons at the greatest distance from him, to write down his own reflections for his own benefit, and to be assured that he deals honestly with others, and that others deal honestly with him.

Let it not be said that it is enough for the master manufacturer, the rich farmer, the extensive merchant, to understand these things, for this is a very false notion. A laborer on a farm will earn much better wages for being intelligent, and understanding thoroughly the business in which he is employed. The case is the same with a manufacturer, a merchant's clerk, or any other person. Besides, to perform an operation understandingly improves a man's mind; while to perform it blindly and ignorantly does a man's mind no good whatever. A professor in a lecture-room shows the working of a steam-engine, and teaches his class the principles on which it operates by means of a small model of a foot or two in length, and this is considered a very improving and valuable employment. But an engineer on board of a steamboat, if he understand the whole process and its principles, is performing the same experiment all the while. If, however, he do not understand the principles, he is in fact doing but little more than the fireman who is employed in supplying the furnace with fuel. So the farmer who understands the laws of vegetation is constantly performing experiments in botany, and by every experiment he is disciplining his own mind.

He who in this manner is laboring understandingly is qualifying himself for a more lucrative employment. He who is

thoroughly acquainted with the business of farming will soon be able to procure a farm on his own account. He who is an intelligent and active clerk will soon be qualified to be admitted as a partner. He who is a skilful and intelligent manufacturing laborer will soon be promoted to be an overseer or an agent. Thus we see that knowledge is desirable, not for one class, but for all classes.

Now, in order to enable men to acquire this knowledge, every one should be taught to read and write and cipher. He who has obtained as much knowledge as this is then able to inform himself concerning anything that pertains to his own department, and hence he is able to qualify himself to rise from one branch of business to another, and to become a rich and well-informed man. Thus Franklin, from being a poor printer's boy, became one of the greatest philosophers of his age; and Sir R. Arkwright, at first a barber's boy, rose to be one of the first men in Great Britain. In this manner, by skill and intelligence, all the great men who have made their own fortunes have risen from obscurity to eminence.

Hence we see the reason why we should have schools for teaching these branches in every neighborhood. If any persons be unable to procure education for themselves, it should be furnished to them for nothing; and, in order to do this, a sufficient number of schools should be supported by the public at large. In this manner every one pays in proportion to his ability, and every one has an equal privilege of sending his children to school. This plan is specially beneficial to those persons who are in moderate circumstances, or who are poor. The rich can easily furnish education to their children; the poor cannot always afford to do it, or if they could afford it, they could not easily unite together in such manner as to procure a proper instructor. When this is done by the public, they have the instruction at the lowest expense, and without any trouble in procuring it.

But this is not all. I have said, that if a man have knowledge of reading, writing, and accounts, he can then educate himself, and acquire all the knowledge that he may need in conducting his own business. This is true. He *can* do it, but he will be much *more likely* to do it if he have been taught in youth the elements of the sciences. If he have been taught the elements of mathematics, he will be much more likely to make a good machinist. If he have been taught the nature of plants and animals, and the best modes of cultivation, and the principles on

which these things depend, he will be much more likely to make a skilful farmer. He who has some knowledge in youth of geography and the productions of the earth, will be much more likely to make an intelligent merchant. It is important that this knowledge be acquired in youth, for after men grow up, they are not so likely to commence the study of a new science, nor have they generally the time necessary to devote to it.

Hence we see the importance of having some higher schools than those which I have mentioned, in which those who choose may learn something of these several branches. Those young persons who have gone through the lower school, and who wish for more knowledge, might here be able to obtain it. On the other hand, those who were careless about their studies, and did not wish for any more knowledge, might go to their several branches of business with what they have already obtained. These additional advantages would be a very suitable reward for diligent, studious, and well-behaved young persons, and would greatly assist such persons in making their way in the world. It would also tend very greatly to open the road to distinction and wealth to all those who were deserving of them, and would enable the poor to rise to eminence as well as the rich, if they only were disposed to avail themselves of the advantages offered to them.

Hence we see that all persons, but *especially* the poor, have a direct interest in public schools, both common and scientific; and they should be willing to pay their proportion of the expense necessary to support them. No man, unless he be an absolute beggar, should expect or wish to receive an education for nothing, any more than a loaf of bread. By paying what he is able, he may enjoy, freely, the advantages of education as well as the rich, while for this education he pays much less than the rich, who derive no more advantage from it than himself. Any man, whether he be poor or rich, must be very unwise who does not wish every other man in his country to be as well educated as the circumstances of his case will allow; and he is very unwise, and very penurious, and very selfish, and very short-sighted, if he be not willing to pay his fair and full proportion towards rendering the means of education as universal and as good as possible.

If we look back upon what we have said, it will readily be seen that the principles which we have explained lead us to the following conclusions:—

1. Nothing that is of any value on earth can be procured without labor.

2. Labor, to be a benefit, must be directed by knowledge. Were a man to labor ever so hard to make a house, he would not succeed unless he *knew how* to do it. Hence the importance of education in order to *profitable* labor.

3. God has placed abundant rewards before men to excite them to labor and abundant penalties to deter them from idleness; and there is reason to think that these rewards and punishments, if left to themselves, will be sufficient to make men industrious.

4. In order to do this, it is important that every man be allowed to earn as much as he honestly can—that is, to improve his condition in the best way he is able; and that, after he has done this, he be allowed to use what he has gained in just such a way as he thinks will make him the happiest, provided he does not interfere with the rights of any one else.

5. While it is important that every man should have all that he has earned, it is equally important that he should have nothing unless he have earned it.

6. Lastly, that every man may know both how to labor to the best advantage, and also how to improve his condition as much as possible by the results of his labor, it is important that every man shall have as much education as possible.

The more a community adopt these principles, the more industrious and happy will they be.

Hence we see the importance to every country both of virtue and intelligence.

If men be virtuous, they will, of course, be honest; that is, they will let alone whatever belongs to their neighbor, and they will, of course, be willing to labor for everything which they want themselves. Hence we see the benefit of all the means which we use in order to make men religious; for if they be really religious, they will, of course, be both virtuous and honest. And if men be intelligent, they will know how to labor to the best advantage; that is, with the least toil, and at the smallest expense, to procure the greatest amount of the means of human happiness. —Dr. Wayland.

THE TRIAL OF SKILL.

LOCKSLEY, FROM "IVANHOE."

"THE yeomen and commons," said Bracy, "must not be dismissed discontented for lack of their share in the sports."

"The day," said Waldemar, "is not yet very far spent—let the archers shoot a few rounds at the target, and the prize be adjudged. This will be an abundant fulfilment of the prince's promises, so far as this herd of Saxon serfs is concerned."

"I thank thee, Waldemar," said the prince; "thou remindest me, too, that I have a debt to pay to that insolent peasant who yesterday insulted our person. Our banquet also shall go forward to-night as we proposed. Were this my last hour of power, it should be an hour sacred to revenge and to pleasure—let new cares come with to-morrow's new day."

The sound of the trumpet soon recalled those spectators who had already begun to leave the field; and proclamation was made that Prince John, suddenly called by high and peremptory public duties, held himself obliged to discontinue the entertainments of to-morrow's festival: nevertheless, that unwilling so many good yeomen should depart without a trial of skill, he was pleased to appoint them, before leaving the ground, presently to execute the competition of archery intended for the morrow. To the best

archer a prize was to be awarded, being a bugle-horn, mounted with silver, and a silken baldrick richly ornamented with a medallion of St. Hubert, the patron of sylvan sport.

More than thirty yeomen at first presented themselves as competitors, several of whom were rangers and under-keepers in the royal forests of Needwood and Charnwood. When, however, the archers understood with whom they were to be matched, upwards of twenty withdrew themselves from the contest, unwilling to encounter the dishonor of almost certain defeat. For in these days the skill of each celebrated marksman was as well known for many miles round him, as the qualities of a horse trained at Newmarket are known to those who frequent that celebrated meeting.

The diminished list of competitors for sylvan fame still amounted to eight. Prince John stepped from his royal seat to view more nearly the persons of these chosen yeomen, several of whom wore the royal livery. Having satisfied his curiosity by this investigation, he looked for the object of his resentment, whom he observed standing in the same spot, and with the same composed countenance which he had exhibited upon the preceding day.

"Fellow," said Prince John, "I guessed by thy insolent babble thou wert no true lover of the long-bow, and I see thou darest not adventure thy skill among such merry men as stand yonder."

"Under favor, sir," replied the yeoman, "I have another reason for refraining to shoot, besides the fearing discomfiture and disgrace."

"And what is thy other reason?" said Prince John, who, for some cause which perhaps he could not himself have explained, felt a painful curiosity respecting this individual.

"Because," replied the woodsman, "I know not if these yeomen and I are used to shoot at the same marks; and because, moreover, I know not how your grace might relish the winning of a third prize by one who has unwittingly fallen under your displeasure."

Prince John colored as he put the question, "What is thy name, yeoman?"

"Locksley," answered the yeoman.

"Then, Locksley," said Prince John, "thou shalt shoot in thy turn, when these yeomen have displayed their skill. If thou carriest the prize, I will add to it twenty nobles; but if thou losest it, thou shalt be stripped of thy Lincoln green, and

scourged out of the lists with bowstrings, for a wordy and insolent braggart."

"And how if I refuse to shoot on such a wager?" said the yeoman. "Your grace's power, supported as it is by so many men-at-arms, may indeed easily strip and scourge me, but cannot compel me to bend or to draw my bow."

"If thou refusest my fair proffer," said the prince, "the provost of the lists shall cut thy bowstring, break thy bow and arrows, and expel thee from the presence as a faint-hearted craven."

"This is no fair chance you put on me, proud prince," said the yeoman, "to compel me to peril myself against the best archers of Leicester and Staffordshire, under the penalty of infamy if they should overshoot me. Nevertheless, I will obey your will."

"Look to him close, men-at-arms," said Prince John, "his heart is sinking: I am jealous lest he attempt to escape the trial. And do you, good fellows, shoot boldly round; a buck and a butt of wine are ready for your refreshment in yonder tent when the prize is won."

A target was placed at the upper end of the southern avenue which led to the lists. The contending archers took their stance in turn, at the bottom of the southern access; the distance between that station and the mark allowing full distance for what was called a shot at rovers. The archers, having previously determined by lot their order of precedence, were to shoot each three shafts in succession. The sports were regulated by an officer of inferior rank, termed the provost of the games; for the high rank of the marshals of the lists would have been held degraded, had they condescended to superintend the games of the yeomanry.

One by one the archers, stepping forward, delivered their shafts yeomanlike and bravely. Of twenty-four arrows, shot in succession, ten were fixed in the target, and the others ranged so near it, that, considering the distance of the mark, it was accounted good archery. Of the ten shafts which hit the target, two within the inner ring were shot by Hubert, a forester in the service of Malvoisin, who was accordingly pronounced victorious.

"Now, Locksley," said Prince John to the devoted yeoman, with a bitter smile, "wilt thou try conclusions with Hubert, or wilt thou yield up bow, baldrick, and quiver to the provost of the sports?"

"Sith it may be no better," said Locksley, "I am content to

try my fortune; on condition that when I have shot two shafts at yonder mark of Hubert's, he shall be bound to shoot one at that which I shall propose."

"That is but fair," answered Prince John, "and it shall not be refused thee. If thou dost beat this braggart, Hubert, I will fill the bugle with silver pennies for thee."

"A man can but do his best," answered Hubert; "but my great-grandsire drew a good long bow at Hastings, and I trust not to dishonor his memory."

The former target was now removed, and a fresh one of the same size placed in its room. Hubert, who, as victor in the first trial of skill, had the right to shoot first, took his aim with great deliberation, long measuring the distance with his eye, while he held in his hand his bended bow, with the arrow placed on the string. At length he made a step forward, and raising the bow at the full stretch of his left arm, till the centre or grasping place was nigh level with his face, he drew the bowstring to his ear. The arrow whistled through the air, and lighted within the inner ring of the target, but not exactly in the centre.

"You have not allowed for the wind, Hubert," said his antagonist, bending his bow, "or that had been a better shot."

So saying, and without showing the least anxiety to pause upon his aim, Locksley stepped to the appointed station, and shot his arrow as carelessly in appearance as if he had not even looked at the mark. He was speaking almost at the instant that the shaft left the bowstring, yet it alighted in the target two inches nearer to the white spot which marked the centre than that of Hubert.

"By the light of heaven!" said Prince John to Hubert, "an thou suffer that runagate knave to overcome thee, thou art worthy of the gallows."

Hubert had but one set speech for all occasions. "An your highness were to hang me," he said, "a man can but do his best. Nevertheless, my grandsire drew a good bow"——

"The foul fiend on thy grandsire and all his generation," interrupted John: "shoot, knave, and shoot thy best, or it shall be the worse for thee."

Thus exhorted, Hubert resumed his place, and not neglecting the caution which he had received from his adversary, he made the necessary allowance for a very light air of wind, which had just arisen, and shot so successfully that his arrow alighted in the very centre of the target.

"A Hubert! a Hubert!" shouted the populace, more interested

in a known person than in a stranger. "In the clout!—in the clout!—a Hubert for ever!"

"Thou canst not mend that shot, Locksley," said the prince, with an insulting smile.

"I will knotch his shaft for him, however," replied Locksley.

And letting fly his arrow with a little more precaution than before, it lighted right upon that of his competitor, which it split to shivers. The people who stood around were so astonished at his wonderful dexterity, that they could not even give vent to their surprise in their usual clamor. "This must be the devil, and no man of flesh and blood," whispered the yeomen to each other; "such archery was never seen since a bow was first bent in Britain."

"And now," said Locksley, "I crave your grace's permission to plant such a mark as is used in the north country; and welcome every brave yeoman who shall try a shot at it to win a smile from the bonnie lass he loves best."

He then turned to leave the lists. "Let your guards attend me," he said, "if you please—I go but to cut a rod from the next willow bush."

Prince John made a signal that some attendants should follow him in case of his escape; but the cry of "Shame! shame!" which burst from the multitude, induced him to alter his ungenerous purpose.

Locksley returned almost instantly with a willow wand about six feet in length, perfectly straight, and rather thicker than a man's thumb. He began to peel this with great composure, observing, at the same time, that to ask a good woodsman to shoot at a target so broad as had hitherto been used, was to put shame upon his skill. "For his own part," he said, "and in the land where he was bred, men would as soon take for their mark King Arthur's round table, which held sixty knights around it. A child of seven years old," he said, "might hit it with a headless shaft; but," added he, walking deliberately to the other end of the lists, and sticking the willow wand upright in the ground, "he that hits that rod at five-score yards, I call him an archer fit to bear both bow and quiver before a king, an it were the stout King Richard himself."

"My grandsire," said Hubert, "drew a good bow at the battle of Hastings, and never shot at such a mark in his life—and neither will I. If this yeoman can cleave that rod, I give him

the bucklers—or rather, I yield to the devil that is in his jerkin, and not to any human skill: a man can but do his best, and I will not shoot where I am sure to miss. I might as well shoot at the edge of our parson's whittle, or at a wheat straw, or at a sunbeam, as at a twinkling white streak which I can hardly see."

"Cowardly dog!" said Prince John. "Sirrah Locksley, do thou shoot; but, if thou hittest such a mark, I will say thou art the first man ever did so. Howe'er it be, thou shalt not crow over us with a mere show of superior skill."

"I will do my best, as Hubert says," answered Locksley; "no man can do more."

So saying, he again bent his bow, but on the present occasion looked with attention to his weapon, and changed the string which he thought was no longer truly round, having been a little frayed by the two former shots. He then took his aim with some deliberation, and the multitude awaited the event in breathless silence. The archer vindicated their opinion of his skill: his arrow split the willow rod against which it was aimed. A jubilee of acclamations followed; and even Prince John, in admiration of Locksley's skill, lost his dislike to his person. "These twenty nobles," he said, "which, with the bugle, thou hast fairly won, are thine own; we will make them fifty, if thou wilt take livery and service with us as a yeoman of our body-guard, and be near to our person. For never did so strong a hand bend a bow, or so true an eye direct a shaft."

"Pardon me, noble prince," said Locksley; "but I have vowed, that if ever I take service, it should be with your royal brother, King Richard. These twenty nobles I leave to Hubert, who has this day drawn as brave a bow as his grandsire did at Hastings. Had his modesty not refused the trial, he would have hit the wand as well as I."

Hubert shook his head as he received with reluctance the bounty of the stranger; and Locksley, anxious to escape further observation, mixed with the crowd, and was seen no more.

—Scott.

OF STUDIES.

Studies serve for delight, for ornament, and for ability. Their chief use for delight is in privateness and retiring; for ornament in discourse; and for ability in the judgment and disposition of

business. For *expert* men can execute, and perhaps judge of particulars, one by one; but the general counsels, and the plots and marshalling of affairs, come best from those that are *learned.* To spend too much time in studies is sloth; to use them too much for ornament is affectation; to make judgment wholly by their rules is the humor of a scholar. They perfect nature, and are perfected by experience. Crafty men contemn studies; simple men admire them; and wise men use them; for they teach not their own use; but that is a wisdom without them and above them, won by observation. Read not to contradict and confute; nor to believe and take for granted; nor to find talk and discourse; but to weigh and consider. Some books are to be tasted, others to be swallowed, and some few to be chewed and digested; that is, some books are to be read only in parts; others to be read, but not curiously; and some few to be read wholly, and with diligence and attention. Some books also may be read by deputy, and extracts made of them by others; but that would be only in the less important arguments, and in the meaner sort of books; else distilled books are like common distilled waters, flashy things. Reading maketh a full man; conference a ready man; and writing an exact man; and, therefore, if a man write little, he had need have a great memory; if he confer little, he had need have a present wit; and if he read little, he had need of much cunning to seem to know that he doth not. Histories make men wise; poets, witty; the mathematics, subtle; *natural* philosophy, deep; *moral*, grave; logic and rhetoric, able to contend. Studies exercise influence upon the morals; nay, there is no *stond* or impediment in the wit, but may be wrought out by fit studies; like as diseases of the body may have appropriate exercises. Bowling is good for the stone and reins; shooting for the lungs and breast; gentle walking for the stomach; riding for the head; and the like. So if a man's wit be wandering, let him study the mathematics; for in demonstrations, if his wit be called away never so little, he must begin again; if his wit be not apt to distinguish or find difference, let him study the schoolmen, for they are hair-splitters; if he be not apt to beat over matters, and to call up one thing to prove and illustrate another, let him study the lawyers' cases. So every defect of the mind may have a special receipt.

—Bacon.

INSTRUCTION.

From heaven descend the drops of dew,
From heaven the gracious showers,
Earth's winter aspect to renew,
And clothe the spring with flowers;
From heaven the beams of morning flow,
That melt the gloom of night;
From heaven the evening breezes blow
Health, fragrance, and delight.

Like genial dew, like fertile showers,
The words of wisdom fall,
Awaken man's unconscious powers,
Strength out of weakness call;
Like morning beams, they strike the mind,
Its loveliness reveals;
And softly then the evening wind
The wounded spirit heals.

As dew and rain, as light and air,
From heaven instruction came
The waste of nature to repair,
Kindle a sacred flame;
A flame to purify the earth,
Exalt her sons on high,
And train them for their second birth,
Their birth beyond the sky.

—James Montgomery.

ADVANTAGES OF STUDYING LATIN AND GREEK.

Latin and Greek are useful, as they inure children to intellectual difficulties, and make the life of a young student what it ought to be, a life of considerable labor. We do not, of course, mean to confine this praise exclusively to the study of Latin and Greek, or suppose that other difficulties might not be found which it would be useful to overcome; but though Latin and Greek have this merit in common with many arts and sciences, still they have it; and, if they do nothing else, they at least secure a solid and vigorous application, at a period of life which materially influences all other periods. To go through the grammar of one language thoroughly is of great use for the mastery of every other grammar; because there obtains, through all languages, a certain analogy to each other in their grammatical

construction. Latin and Greek have now mixed themselves etymologically with all the languages of modern Europe, and with none more than our own; so that it is necessary to read these two tongues for other objects than themselves.

The ancient languages are, as mere inventions—as pieces of mechanism—incomparably more beautiful than any of the modern languages of Europe; their mode of signifying time and case by terminations, instead of auxiliary verbs and particles, would of itself stamp their superiority. Add to this the copiousness of the Greek language, with the fancy, harmony, and majesty of its compounds, and there are quite sufficient reasons why the classics should be studied for the beauties of language. Compared to them merely as vehicles of thought and passion, all modern languages are dull, ill-contrived, and barbarous.

That a great part of the Scriptures have come down to us in the Greek language is of itself a reason, if all others were wanting, why education should be planned so as to produce a supply of Greek scholars.

The cultivation of style is very justly made a part of education. Everything which is written is meant either to please or to instruct. The second object it is difficult to effect without attending to the first; and the cultivation of style is the acquisition of those rules and literary habits which sagacity anticipates, or experience shows to be the most effectual means of pleasing. Those works are the best which have longest stood the test of time, and pleased the greatest number of exercised minds. Whatever, therefore, our conjectures may be, we cannot be so sure that the best modern writers can afford as good models as the ancients; we cannot be certain that they will live through the revolutions of the world, and continue to please in every climate, under every species of government, through every stage of civilization. The moderns have been well taught by their masters; but the time is hardly yet come when the necessity for such instruction no longer exists. We may still borrow descriptive power from Tacitus; dignified perspicuity from Livy; simplicity from Cæsar; and from Homer, some portion of that light and heat which, dispersed into ten thousand channels, has filled the world with bright images and illustrious thoughts. Let the cultivator of modern literature addict himself to the purest models of taste which France, Italy, and England could supply, he might still learn from Virgil to be majestic, and from Tibullus to be tender; he might not yet look upon the face of nature as

Theocritus saw it, nor might he reach those springs of pathos with which Euripides softened the hearts of his audience. In short, it appears to us that there are so many excellent reasons why a certain number of scholars should be kept up in this and in every civilized country, that we should consider every system of education from which classical education was excluded as radically erroneous, and completely absurd. —SYDNEY SMITH.

THE LIBRARY.

NOT hope herself, with all her flattering art,
Can cure the stubborn sickness of the heart;
The soul disdains each comfort she prepares,
And anxious searches for congenial cares;
Those lenient cares which, with our own combined,
By mix'd sensations ease the afflicted mind,
And steal our grief away, and leave their own behind;
A lighter grief! which feeling hearts endure
Without regret, nor even demand a cure.
But what strange art, what magic can dispose
The troubled mind to change its native woes?
Or lead us willing from ourselves, to see
Others more wretched, more undone than we?
This books can do;—nor this alone; they give
New views to life, and teach us how to live;
They soothe the grieved, the stubborn they chastise;
Fools they admonish, and confirm the wise:
Their aid they yield to all; they never shun
The man of sorrow, nor the wretch undone:
Unlike the hard, the selfish, and the proud,
They fly not sullen from the suppliant crowd;
Nor tell to various people various things,
But show to subjects what they show to kings.

—CRABBE.

ON THE DEFENCE OF CANADA.

(13th March 1865.)

HOWEVER long this discussion may have been, I, for one, cannot regret that it has taken place; for by the majority of members in this house, two opinions have been expressed which cannot fail to be useful in the quarters to which they relate. The first opinion is that which has been peculiarly dwelt upon by the

honorable member who has just sat down—namely, an earnest desire that the most friendly relations should be maintained between Great Britain and the United States of America; and next, the opinion that we should maintain the connection which exists between this country and our provinces on the North American continent, so long as the people of those provinces are desirous of maintaining their connection with the mother country. The honorable member who has just spoken has made what in one respect may appear a paradoxical, but what, I think, as human nature is constituted, was a very conciliatory speech towards the United States. Though he reviewed a long course of events to prove that the United States have been most grievously ill-treated by this country, I don't agree with him in any one of these points; it is no doubt a part of human nature that you cannot please any man or any set of men better than by telling them they have been exceedingly ill-used. I won't follow the honorable member when he complains that we admitted the belligerent rights of the south—an admission which was the result of necessity and not of choice; I will not follow him into the discussion of the Trent question, which I thought had been fully disposed of, and into the questions which have arisen between the government, or rather, I should say, the people of some parts of Canada and the United States, because, as he admitted himself, the conduct of the Canadian Government has been such as to be acknowledged gratefully by the government of the United States as a full and complete fulfilment of the duties of friendly neighborhood. The hon. gentleman says there exists in this country a jealousy of the United States. Sir, I utterly deny that assertion. We feel no jealousy of the United States. On the contrary, I am sure that every Englishman must feel proud at seeing upon the other side of the Atlantic a community sprung from the same ancestry as ourselves, rising in the scale of civilization, and attaining every degree of prosperity—ay, and of power, as well as wealth. I therefore entirely deny that there has been in this country any feeling of jealousy as regards the United States. Undoubtedly there are men who, differing from the hon. gentleman in their theory of government, cannot see with the same approbation which he feels the trial on the other side of the Atlantic of a system of government which we do not think is the best, or the most conducive to the happiness of those for whom it was established. But that is an entirely different thing from the feeling which the hon. gentleman has

supposed. No doubt, during this contest in America there has been experienced, and probably felt both in the north and in the south, some irritation against this country. But that irritation was caused by the natural feeling which two parties in a quarrel have, that a third party who does not espouse either side is to a certain degree doing both sides an injury, or giving them some cause of complaint or of jealousy. The north wished us to declare on their side; the south wished us to declare on theirs; and as we maintained a perfect neutrality between the two, some slight degree of irritation arose on both sides against us. But I am equally persuaded with the hon. gentleman that among the great bulk of the people of the United States there are feelings deeper than that irritation—feelings of goodwill towards the country with which their ancestors were connected; and I am satisfied that when this unfortunate contest shall have ceased, whatever its termination, the natural feelings of goodwill and relationship which ought to prevail between the two nations will take the place of any temporary irritation which the war may have occasioned. I am quite satisfied also that England will not give to America any just cause of complaint—that war will not proceed from us; and if war does not proceed from our side, and if, as the hon. gentleman thinks, it does not proceed from theirs, then we may have a well-founded expectation that in spite of adverse appearances for the moment, and in spite of the prognostications of many, the friendly relations between this country and the United States will not incur any real danger of interruption. But that is no reason why we should not use the means in our power to place our fellow-citizens, if I may so call them, in Canada and the northern provinces, in a state of defence should they be attacked. There is no better security for peace than strength to resist attack, if attack should come. That is no provocation. It is an abuse of terms to say that when you employ means to prevent danger you are provoking that danger, and irritating the party against whom those precautions may be taken. If no animosity exists, these precautions can have no effect except that of inspiring confidence in the party in whose favor they are made. If, on the other hand, there be a disposition to attack, that disposition is sure to be lessened in proportion as the chance of success is diminished. Now I cannot agree with my right honorable friend (Mr Lowe) in thinking that whatever the difficulties—and difficulties undoubtedly there may be—in successfully resisting

an attack, if it should be made by America, we should regard the defence of Canada as an undertaking which we could not succeed in accomplishing; I think, on the contrary, that Canada may be defended, and I also feel that the honor of England and the good faith which is due to our loyal fellow-countrymen in these northern provinces require that, at all events, we should make the attempt successfully to defend her. Not concurring, therefore, in the argument of my right hon. friend that Canada cannot be defended, least of all do I concur in his conclusion, that, assuming defence to be impossible, we ought forthwith to withdraw our troops. I neither admit the argument nor assent to its conclusion; and I am anxious that there should be no mistake on the subject; and that it may be fully understood that it is not the intention of the government to follow the advice of my right hon. friend, and withdraw our troops from Canada. On the contrary, I feel that the honor of England demands, and that our duty as a government binds us to do everything—moreover, that we shall have the sanction of the British nation in doing everything—that we can to defend our fellow-countrymen in Canada. As I have already said, I am persuaded that the tone of moderation which has prevailed in this debate must be useful both in Canada and in the United States. No doubt there are those who have endeavored to persuade the people of the United States that there exists in this country a spirit of hostility towards them, and that we are looking out for grounds of quarrel. There can, however, be no real and just grounds for quarrel between us. We certainly shall not seek such grounds, nor shall we invent them; and if the speech of the hon. gentleman who has just sat down be a true and faithful exposition of the sentiments of the people of the United States, there can be no well-grounded apprehension that the peace happily prevailing between us is in danger of interruption. I can confirm the statement of my right hon. friend, that the present relations between the two governments are perfectly friendly and satisfactory. We have no complaint to make of the government of the United States; they have acted in a fair and honorable manner in all the matters that may have arisen between us. No doubt there are claims which they have put forward, not urging them at present, but laying the ground for their discussion at some future time. No doubt, also, we have claims upon them which we do not put forward at present, but have announced to be claims which at some future time may be

discussed. But I should trust that we both feel it to be for the interest, ay, and for the honor, of the two countries, that peace should be preserved, and that matters of this sort ought to be capable of a friendly and amicable adjustment. All I can say is that the government, as long as they continue to be chargeable with the conduct of affairs, will do everything that the honor and interests of the country permit them to do, to maintain inviolate the relations of peace and friendship between the two countries. —PALMERSTON.

THE STUDENT.

"WHY burns thy lamp so late, my friend,
Into the kindling day?"
"It is burning so late to show the gate
That leads to wisdom's way;
As a star doth it shine on this soul of mine,
To guide me with its ray.
Dear is the hour when slumber's power
Weighs down the lids of men;
Proud and alone I mount my throne,
For I am a monarch then!
The great and the sage of each bygone age
Assemble at my call;
Oh, happy am I in my poverty,
For these are my brothers all!
Their voices I hear, so strong and clear,
Like a solemn organ's strain,
Their words I drink, and their thoughts I think,
They are living in me again!
For their seal'd store of immortal lore
To me they must unclose:
Labor is bliss with a thought like this:
Toil is my best repose!"

"Why are thy cheeks so pale, my friend,
Like a snow-cloud wan and gray?"
"They were bleach'd thus white in the mind's clear light,
Which is deepening day by day;
Though the hue they have be the hue of the grave,
I wish it not away!
Strength may depart, and youth of heart
May sink into the tomb;
Little reck I that the flower must die
Before the fruit can bloom.
I have striven hard for my high reward,
Through many a lonely year,

But the goal I reach—it is mine to teach—
Stand still, O man, and hear!
I may wreathe my name with the brightness of fame,
To shine on history's pages,
It shall be a gem on the diadem
Of the past, for future ages.
Oh, life is a bliss with a hope like this—
I clasp it as a bride!"
Pale grow his cheeks while the student speaks—
He laid him down and died!

—*Dublin University Magazine.*

THE ACADEMY OF LAGADO.

In the school of political projectors I was but ill entertained, the professors appearing, in my judgment, wholly out of their senses; which is a scene that never fails to make me melancholy. These unhappy people were proposing schemes for persuading monarchs to choose favorites upon the score of their wisdom, capacity, and virtue; of teaching ministers to consult the public good; of rewarding merit, great abilities, and eminent services; of instructing princes to know their true interest, by placing it on the same foundation with that of their people; of choosing for employments persons qualified to exercise them; with many other wild impossible chimeras, that never entered before into the heart of man to conceive, and confirmed in me the old observation that there is nothing so extravagant and irrational which some philosophers have not maintained for truth.

But, however, I shall so far do justice to this part of the academy, as to acknowledge that all of them were not so visionary. There was a most ingenious doctor, who seemed to be perfectly versed in the whole nature and system of government. This illustrious person had very usefully employed his studies in finding out effectual remedies for all diseases and corruptions to which the several kinds of public administration are subject, by the vices or infirmities of those who govern, as well as by the licentiousness of those who are to obey. For instance, whereas all writers and reasoners have agreed that there is a strict universal resemblance between the natural and political body, can there be anything more evident than that the health of both must be preserved, and the diseases cured, by the same prescriptions? . . . This doctor therefore proposed that upon the meeting of a senate, certain physicians should attend at the three first days of their

sitting, and at the close of each day's debate, feel the pulses of every senator; after which, having maturely considered and consulted upon the nature of the several maladies, and the methods of cure, they should on the fourth day return to the senate-house, attended by their apothecaries, stored with proper medicines; and, before the members sat, administer to each of them lenitives, aperitives, abstersives, corrosives, restringents, palliatives, laxatives, cephalalgics, icterics, apophlegmatics, acoustics, as their several cases required; and according as these medicines should operate, repeat, alter, or omit them at the next meeting.

This project could not be of any great expense to the public, and might, in my poor opinion, be of much use for the despatch of business in those countries where senates have any share in the legislative power; beget unanimity, shorten debates, open a few mouths which are now closed, and close many more which are now open; curb the petulancy of the young, and correct the positiveness of the old; rouse the stupid, and damp the pert.

Again, because it is a general complaint that the favorites of princes are troubled with short and weak memories, the same doctor proposed, that whoever attended a first minister, after having told his business with the utmost brevity, and in the plainest words, should, at his departure, give the said minister a tweak by the nose, or a kick in the belly, or tread on his corns, or lug him thrice by both ears, or run a pin into his body, or pinch his arms black and blue, to prevent forgetfulness; and at every levee day repeat the same operation until the business were done or absolutely refused.

He likewise directed that every senator in the great council of a nation, after he had delivered his opinion, and argued in the defence of it, should be obliged to give his vote directly contrary; because if that were done, the result would infallibly terminate in the good of the public. —Swift.

BLESSINGS OF INSTRUCTION.

The heart has tendrils, like the vine,
Which round another's bosom twine:
Outspringing from the parent tree
Of deeply-planted sympathy,
Whose flowers are hope, its fruits are bliss;
Beneficence its harvest is.

There are some bosoms, dark and drear,
Which an unwater'd desert are ;
Yet there a curious eye may trace
Some smiling spot, some verdant place,
Where little flowers, the weeds between,
Spend their soft fragrance all unseen.

There is, in every human heart,
Some not completely barren part,
Where seeds of love and truth might grow,
And flowers of generous virtue blow ;
To plant, to watch, to water there,—
This be our duty—this our care !

And sweet it is the growth to trace
Of worth, of intellect, of grace,
In bosoms where our labors first
Bid the young seed of spring-time burst ;
And lead it on, from hour to hour,
To ripen into perfect flower.

Hast thou e'er seen a garden clad
In all the robes that Eden had ?
Or vale o'erspread with streams and trees,—
A paradise of mysteries ?—
Plains, with green hills adorning them,
Like jewels in a diadem ?—

These gardens, vales, and plains, and hills,
Which beauty gilds and music fills,
Were once but deserts—Culture's hand
Has scatter'd verdure o'er the land :
And smiles and fragrance rule serene
Where barren wilds usurp'd the scene.

And such is man ! a soil which breeds,
Or sweetest flowers, or vilest weeds :
Flowers lovely as the morning's light—
Weeds deadly as the aconite ;
Just as his heart is train'd to bear
The poisonous weed, or floweret fair.

Flow, then, pure knowledge ! ever flow !
Change nature's face in man below ;
A paradise once more disclose—
Make deserts bloom with Sharon's rose ;
And, through a Saviour's blood, once shed,
Raise his forlorn and drooping head. —Bowring.

RELIGION AND THE INTELLECT.

Though piety does not disdain to enlighten dulness and instruct ignorance, she has no natural affinity or peculiar preference for them; and though Christianity, like her Divine Author, compassionately condescends to enter the hovel of the peasant, and preach the gospel to the poor, she is no less qualified—and it is a mark of equally compassionate condescension—to enter the philosopher's study; and, like the sun, imparting splendor to the objects she shines upon, not receiving any from them, to pour a flood of brighter glory round the grandest developments of intellect, the sublimest discoveries of science; and thus make them instrumental in communicating the most exalted enjoyment in their power to bestow. Will not the power of the intellect afford the highest gratification when directed to their noblest object, and employed in reverentially exploring the perfections and gratefully celebrating the praises of their glorious source—the fountain of mind, the God of intellect? Will not the discoveries of science be a source of the purest pleasure which science can impart, when she unfolds her stupendous machinery to him who loves to trace, in every part of the wondrous mechanism of the material universe, the Master Hand which guides and sustains the whole; and to watch with adoring reverence, in all its movements and contrivances, the footsteps of that God

> "Who wheels His throne upon the rolling worlds,
> And gives its lustre to an insect's wings?"

Will not the narratives of voyagers and travellers yield most pleasure to him who, in the peculiarities and productions of every clime, discovers fresh proofs of the wisdom, power, and goodness of his covenant God? Will not astronomy, with her glorious array of countless suns and systems, sparkling throughout the boundlessness of space, pour the sublimest joy into the heart of him who, while gazing on the glories she unveils, believes and remembers that He who first created and still upholds all those suns and systems is that very Jesus whose love has redeemed, and whose power will uphold him for ever; and that above those starry worlds where Jesus reigns, a dwelling-place, a palace is prepared for him, where he shall reign as a king and priest unto God, shining as the brightness of the firmament—yea, like the sun in the kingdom of his Father—for ever and ever? Will not he walk through creation with the happiest heart, who regards

it as a magnificent temple, hallowed with the presence, and vocal with the praises of the God he loves; and who delights, wherever he looks around, to see the glory of that God filling the temple? And will not nature's beauteous scenery, whether in its milder or more majestic features, breathe its very sweetest influences over the spirit of that man who, after having gazed in rapturous delight on her scenes of sublimity or softness, with filial confidence inspired,

> "Can lift to heaven an unpresumptuous eye,
> And, smiling, say—'My Father made them all?'"

Must not imagination also unveil her loveliest visions, arrayed in her brightest coloring, when her inspiration is drawn from heaven; when, instead of crawling, worm-like, amidst the dust and defilements of earth, she soars, like the eagle, to the skies; and while mounting upward, the light that sparkles on her wings is the light of the Sun of righteousness—the glory of God? And will not music pour her sublimest and sweetest melodies on his ear, who employs the magic of her influence as a sacred charm to drive away the evil spirit of discontent; attune the heart to holy thankfulness and joy; and enable the pious worshipper on earth to anticipate the happiness of heaven—yea, even here below to take part in the anthem of the skies, and join with the celestial choir in singing "praise unto Him that sitteth upon the throne, and to the Lamb, even the Lamb that was slain?" Surely, then, if godliness thus impart additional grandeur and sweetness to every pleasure which flows through the channel of the intellect, by imparting to them all so much of the glory of God, and the spirit of heaven, it must be admitted, that, in this respect also, godliness has the promise of the life that now is, as well as of that which is to come; here also we must confess that godliness is great gain! —Hugh White.

HYMN TO THE CREATOR.

These are Thy glorious works, Parent of good,
Almighty, thine this universal frame,
Thus wondrous fair: Thyself how wondrous then!
Unspeakable, who sitt'st above these heavens,
To us invisible, or dimly seen
In these thy lowest works; yet these declare
Thy goodness beyond thought, and power divine.
Speak, ye who best can tell, ye sons of light,
Angels; for ye behold Him, and with songs

And choral symphonies, day without night,
Circle His throne rejoicing ; ye in heaven
On earth, join, all ye creatures, to extol
Him first, Him last, Him midst, and without end.
Fairest of stars, last in the train of night,
If, better, thou belong not to the dawn,
Sure pledge of day, that crown'st the smiling morn
With thy bright circlet, praise Him in thy sphere,
While day arises, that sweet hour of prime.
Thou sun, of this great world both eye and soul,
Acknowledge Him thy greater—sound His praise
In thy eternal course, both when thou climb'st,
And when high noon hast gain'd, and when thou fall'st
Moon, that now meet'st the orient sun, now fliest,
With the fix'd stars, fix'd in their orb that flies ;
And ye five other wandering fires, that move
In mystic dance, not without song, resound
His praise, who out of darkness call'd up light.
Air, and ye elements, the eldest birth
Of nature's womb, that in quaternion run
Perpetual circle, multiform, and mix
And nourish all things ; let your ceaseless change
Vary to our great Maker still new praise.
Ye mists and exhalations, that now rise
From hill or steaming lake, dusky or gray,
Till the sun paint your fleecy skirts with gold,
In honor to the world's great Author rise ;
Whether to deck with clouds the uncolor'd sky,
Or wet the thirsty earth with falling showers,
Rising or falling, still advance His praise.
His praise, ye winds, that from four quarters blow,
Breathe soft or loud ; and wave your tops, ye pines,
With every plant, in sign of worship wave.
Fountains, and ye that warble, as ye flow,
Melodious murmurs, warbling tune His praise.
Join voices, all ye living souls : ye birds,
That singing up to heaven-gate ascend,
Bear on your wings and in your notes His praise.
Ye that in waters glide, and ye that walk
The earth, and stately tread, or lowly creep,
Witness, if I be silent, morn or even,
To hill or valley, fountain or fresh shade,
Made vocal by my song, and taught His praise.
Hail, Universal Lord, be bounteous still
To give us only good ; and if the night
Hath gather'd aught of evil, or conceal'd,
Disperse it, as now light dispels the dark !

—Milton.

THE TURF SHALL BE MY FRAGRANT SHRINE.

The turf shall be my fragrant shrine ;
My temple, Lord, that arch of Thine ;
My censer's breath the mountain airs,
And silent thoughts my only prayers.

My choir shall be the moonlight waves,
When murmuring homeward to their caves,
Or when the stillness of the sea,
Even more than music, breathes of Thee.

I 'll seek by day some glade unknown,
All light and silence, like Thy throne ;
And the pale stars shall be at night
The only eyes that watch my rite.

Thy heaven, on which 'tis bliss to look,
Shall be my pure and shining book,
Where I shall read, in words of flame,
The glories of Thy wondrous name.

I'll read Thy anger in the rack
That clouds a while the daybeam's track ;
Thy mercy in the azure hue
Of sunny brightness breaking through !

There 's nothing bright above, below,
From flowers that bloom to stars that glow,
But in its light my soul can see
Some feature of Thy Deity !

There 's nothing dark below, above,
But in its gloom I trace Thy love,
And meekly wait that moment when
Thy touch shall burn all bright again ! —Moore.

CANADA, THE LAND OF OUR ADOPTION.

When I consider the advance of the country in education and in other important elements of greatness and of prosperity, I must say that I feel but little sympathy with those who indulge in mournful recollections of what they have left, or querulous complaints of their present position, instead of acknowledging the advantages that they enjoy, or looking forward to the bright future which is before them. Let us consider for a moment what are

the leading characteristics of this fair land of our adoption. A fertile soil, amply rewarding labor in the abundance and diversity of its produce; a salubrious climate, calculated to rear a hardy and vigorous race; water communication by noble rivers and vast lakes, (or rather mediterranean seas,) unequalled in the world; and millions of acres of unoccupied land, able to support millions of additional immigrants. Let us add to these natural blessings, the results of the energy and enterprise of an active and intelligent population: our cities with all the conveniences and comforts of European towns of twice their population and ten times their age; our villages springing up where lately there were but dense forests or uncultivated wastes; the remotest points of this extensive country connected by railroads; the facilities afforded for the education of our children by our common schools, our grammar schools, our private seminaries, our colleges, and our universities; the progress of knowledge advanced by the scientific and literary societies and institutes established in our cities and towns; the laws respected and enforced, and justice firmly and impartially administered; the solemn duties of religion inculcated by fixed ministrations or by the occasional visits of the missionary; the voice of prayer and praise rising alike from the stately piles in our towns that rear their spires towards heaven, and the lowly shanty which scarce lifts its humble head under the leafy arches of our backwoods; and all this with the full enjoyment of the blessings of civil and religious liberty conferred by our own free constitution, and secured by our connection with that glorious empire of which we form a part. In my opinion, the language of dissatisfaction or complaint but little becomes those who enjoy such advantages. Thanksgiving is rather our duty—thanksgiving to Him from whom all blessings flow, for what in His abundant mercy He has given to us, and prayer to the same Almighty Being for contentment with what we have—for peace, wherein we may use and enjoy what His bountiful hand has provided for us. By peace, I mean not freedom from war—not tranquillity undisturbed by aggression from without;—of that I have but little fear. Our relations with the great republic on our borders are such as become good neighbors, who remember that we are both sprung from the same old stock—that we are bound together by the community of interest, and by the mutual affection produced by commerce, by friendship, and by intermarriage—that we are both animated by the same desire for social advancement, ay, and by the same love of freedom,

however we differ as to the best means of securing it. If ever hostilities should arise—and may God in His mercy avert such a calamity!—we shall be supported by the boundless resources of the most powerful nation on earth, and—what is better still—by the hearts and hands of our own people, united to a man, in defence of their altars and their homes, for their Queen and for their country. I do not mean, then, freedom from aggression from without, of which, as I have said, I have but little fear, but I do mean freedom from internal strife, from the injurious influences of bickerings and contentions with each other. I do mean that peace which is produced by mutual forbearance—by laying aside national feuds and party differences, and by the union of all for the advancement of the welfare of their common country, the land of the Maple Leaf! Let me not be mistaken. I do not ask the immigrants from our parent isles to forget the dear land of their birth across the ocean—far from it. The man that has ceased to love his native soil will never be true to his adopted country. But I do call upon them to merge all distinctions under the sweet and honored name of Canadian, representing, as it does, the land of their adoption—the home of their choice—and with many of us, the birthplace of those that are nearest and dearest round our own firesides, and probably the last resting-place of their and our bones. For such peace, then, for such unanimity, for such advancement of Canada, let us offer up our humble prayers to the Giver of all good; nor do I know any more appropriate words in which this supplication can be offered, than those which must be familiar to many whom I address, and in which I doubt not all will cordially join—that "we may live in the fear of God, in dutiful allegiance to the Queen, and in brotherly love and Christian charity each towards the other."

—Rev. Dr. M'Caul.

REFLECTIONS ON FLOWERS.

"Consider the lilies of the field, how they grow."—Matthew vi. 28.

Sweet nurslings of the vernal skies,
Bathed in soft airs, and fed with dew,
What more than magic in you lies
To fill the heart's fond view!
In childhood's sports, companions gay;
In sorrow, on life's downward way,
How soothing! in our last decay,
Memorials prompt and true.

Relics ye are of Eden's bowers,
As pure, as fragrant, and as fair
As when ye crown'd the sunshine hours
Of happy wanderers there.
Fallen all beside—the world of life,
How is it stain'd with fear and strife!
In reason's world what storms are rife,
What passions rage and glare!

But cheerful and unchanged the while
Your first and perfect form ye show,
The same that won Eve's matron smile
In the world's opening glow.
The stars of heaven a course are taught
Too high above our human thought;—
Ye may be found, if ye are sought,
And as we gaze we know.

Ye dwell beside our paths and homes,
Our paths of sin, our homes of sorrow,
And guilty man, where'er he roams,
Your innocent mirth may borrow.
The birds of air before us fleet,
They cannot brook our shame to meet—
But we may taste your solace sweet,
And come again to-morrow.

Ye fearless in your nests abide—
Nor may we scorn, too proudly wise,
Your silent lessons, undescried
By all but lowly eyes;
For ye could draw the admiring gaze
Of Him who worlds and hearts surveys:
Your order wild, your fragrant maze,
He taught us how to prize.

Ye felt your Maker's smile that hour,
As when He paused and own'd you good;
His blessing on earth's primal bower,
Ye felt it all renew'd.
What care ye now, if winter's storm
Sweep ruthless o'er each silken form?
Christ's blessing at your heart is warm,
Ye fear no vexing mood.

Alas! of thousand bosoms kind,
That daily court you and caress,
How few the happy secret find
Of your calm loveliness!

"Live for to-day! to-morrow's light
To-morrow's cares shall bring to sight.
Go, sleep like closing flowers at night,
And Heaven thy morn will bless."

—KEBLE.

FROM "THE DESERTED VILLAGE."

NEAR yonder copse, where once the garden smiled,
And still where many a garden-flower grows wild,
There, where a few torn shrubs the place disclose,
The village preacher's modest mansion rose.
A man he was to all the country dear,
And passing rich with forty pounds a year;
Remote from towns he ran his godly race,
Nor e'er had changed, nor wish'd to change, his place;
Unskilful he to fawn, or seek for power,
By doctrines fashion'd to the varying hour:
Far other aims his heart had learn'd to prize,
More bent to raise the wretched than to rise.
His house was known to all the vagrant train—
He chid their wanderings, but relieved their pain;
The long-remember'd beggar was his guest,
Whose beard, descending, swept his aged breast;

The ruin'd spendthrift, now no longer proud,
Claim'd kindred there, and had his claims allow'd;
The broken soldier, kindly bid to stay,
Sat by his fire, and talk'd the night away,
Wept o'er his wounds, or, tales of sorrow done,
Shoulder'd his crutch, and show'd how fields were won.
Pleased with his guests, the good man learn'd to glow,
And quite forgot their vices in their woe;
Careless their merits or their faults to scan,
His pity gave ere charity began.

Thus to relieve the wretched was his pride,
And even his failings lean'd to virtue's side;
But in his duty prompt at every call,
He watch'd and wept, he pray'd and felt for all;
And, as a bird each fond endearment tries
To tempt its new-fledged offspring to the skies,
He tried each art, reproved each dull delay,
Allured to brighter worlds, and led the way.

Beside the bed where parting life was laid,
And sorrow, guilt, and pain by turns dismay'd,
The reverend champion stood. At his control,
Despair and anguish fled the struggling soul;
Comfort came down the trembling wretch to raise,
And his last faltering accents whisper'd praise.

At church, with meek and unaffected grace,
His looks adorn'd the venerable place;
Truth from his lips prevail'd with double sway,
And fools who came to scoff, remain'd to pray.
The service past, around the pious man,
With steady zeal, each honest rustic ran;
Even children follow'd with endearing wile,
And pluck'd his gown to share the good man's smile;
His ready smile a parent's warmth express'd,
Their welfare pleased him, and their cares distress'd:
To them his heart, his love, his griefs were given,
But all his serious thoughts had rest in heaven.
As some tall cliff, that lifts its awful form,
Swells from the vale, and midway leaves the storm;
Though round its breast the rolling clouds are spread,
Eternal sunshine settles on its head.

—GOLDSMITH.

THE MARINER'S HYMN.

LAUNCH thy bark, mariner! Christian, God speed thee!
Let loose the rudder-bands! good angels lead thee!
Set thy sails warily; tempests will come;
Steer thy course steadily! Christian, steer home!

Look to the weather-bow, breakers are round thee!
Let fall the plummet now—shallows may ground thee.
Reef in the fore-sail there! hold the helm fast!
So—let the vessel wear! there swept the blast.

What of the night, watchman? what of the night?
"Cloudy—all quiet—no land yet—all 's right."
Be wakeful, be vigilant!—danger may be
At an hour when all seemeth securest to thee.

How! gains the leak so fast? Clean out the hold—
Hoist up thy merchandise—heave out thy gold!
There—let the ingots go!—now the ship rights;
Hurrah! the harbor's near—lo, the red lights!

Slacken not sail yet at inlet or island;
Straight for the beacon steer—straight for the high land;
Crowd all thy canvas on, cut through the foam—
Christian! cast anchor now—HEAVEN IS THY HOME.

—CAROLINE SOUTHEY.

CANADA, THE LAND OF OUR BIRTH.

IT cannot be too strongly impressed upon every mind, that it is on Canadian energy, Canadian ambition, Canadian self-reliance, skill, and enterprise—in a word, on Canadian patriotism—that Canadian prosperity, elevation, and happiness depend. The fact that some men, by honest and intelligent industry, as tradesmen, mechanics, farmers, merchants, and professional men, have risen from poverty to comfort, and even affluence, shows what others might have done by equal honesty, intelligence, and industry. In agricultural productiveness, Canada is superior to New York; in water-power and hydraulic privileges it is equal to any of the New England States; in lumber it is a contributor to both the American and English markets; its mineral resources are much more than ample to supply its own implements of industry, as its cattle and flocks far exceed its wants for labor, food and clothing. Its sky is as clear as that of Italy, and its climate as healthy as that of Germany; its institutions are even freer than those of England, and its administration of justice confessedly more independent and impartial than that of the United States. The social and material advancement of Canada in former years was confessedly slow; but compare its progress for the last ten years in any and every respect with that of any of the neighboring states from Maine to Michigan, apart from the advantages

which some of them possess as being the seaports and thoroughfares for other states, and the results will be honorable to Canada. Compare everything progressive in those states which is not adventitious, but which depends upon home industry and enterprise, and Canada, with all its faults and shortcomings, has much more reason to be proud than to be ashamed. It is true Canadian Hippiases have done much to disturb and retard its interests; but this spirit of conspiring against one's country instead of consulting and maintaining its honor and interests, like an Aristides and a Conon, even in exile, is as alien to the general feeling as it is hostile to the best interests of Canada. But in as far as this spirit exists—this spirit of crying to Hercules instead of helping one's self—Canadian enterprise will be damped, the value of Canadian securities and property will be depreciated, and Canadian progress impeded. In the days of Grecian self-reliance, unity, and patriotism, that little peninsula of not half the territorial extent of Canada, repelled the most numerous armies recorded in history, and defied a power whose domains extended from the Indus to the Ægean, and from the Euxine to the cataracts of the Nile. Let each Canadian love his country and seek its glory as did the ancient Greeks, during the era when private patriotism and public virtue were inscribed upon their national escutcheon. We have no strife of foreign war—no hostile rivalship of nations;—our warfare is a domestic, bloodless one—a warfare of virtue against vice, of knowledge against ignorance, of self-dependence against foreign dependence, of public spirit against personal littleness, of the love of Canada as ourselves, instead of the love of self against Canada; of the dignified and generous industry of a Cincinnatus, instead of the selfish and protean adventures of an Alcibiades. Surely if

> "The shuddering tenant of the frigid zone
> Proudly proclaims the happiest spot his own;
> The naked negro, panting on the line,
> Boasts of his golden sands and palmy wine;"

all true Canadians can say to the genial land of their birth or adoption,—

> "Our bosoms with rapture beat high at thy name,
> Thy health is our transport—our triumph thy fame."

—Rev. Dr. Ryerson.

HYMN OF NATURE.

God of the earth's extended plains!
The dark green fields contented lie;
The mountains rise like holy towers,
Where man might commune with the sky;
The tall cliff challenges the storm
That lours upon the vale below,
Where shaded fountains send their streams
With joyous music in their flow.

God of the dark and heavy deep!
The waves lie sleeping on the sands,
Till the fierce trumpet of the storm
Hath summon'd up their thundering bands;
Then the white sails are dash'd like foam,
Or hurry trembling o'er the seas,
Till, calm'd by Thee, the sinking gale
Serenely breathes, Depart in peace!

God of the forest's solemn shade!
The grandeur of the lonely tree,
That wrestles singly with the gale,
Lifts up admiring eyes to Thee:
But more majestic far they stand,
When, side by side, their ranks they form
To wave on high their plumes of green,
And fight their battles with the storm.

God of the light and viewless air!
Where summer breezes sweetly flow,
Or, gathering in their angry might,
The fierce and wintry tempests blow;
All—from the evening's plaintive sigh,
That hardly lifts the drooping flower,
To the wild whirlwind's midnight cry—
Breathe forth the language of Thy power.

God of the fair and open sky!
How gloriously above us springs
The tented dome of heavenly blue,
Suspended on the rainbow's rings!
Each brilliant star that sparkles through,
Each gilded cloud that wanders free
In evening's purple radiance, gives
The beauty of its praise to Thee.

God of the rolling orbs above!
Thy name is written clearly bright
In the warm day's unvarying blaze,
Or evening's golden shower of light.
For every fire that fronts the sun,
And every spark that walks alone
Around the utmost verge of heaven,
Were kindled at Thy burning throne.

God of the world! the hour must come,
And nature's self to dust return;
Her crumbling altars must decay,
Her incense fires shall cease to burn;
But still her grand and lovely scenes
Have made man's warmest praises flow;
For hearts grow holier as they trace
The beauty of the world below.

—PEABODY.

ON PARLIAMENTARY REFORM.

SIR, the hour has arrived when this protracted debate must come to an end—(cheers.) I cannot resent the warmth with which that last expression of mine has been re-echoed. My apologies to the house are sincere. I feel deeply indebted, not to gentlemen sitting on this side of the house only, but also and not less to honorable gentlemen opposite, for the patience with which they have heard me. But a very few words more, and I have done. May I speak briefly to honorable gentlemen on the other side, as some of them have copiously addressed advice to gentlemen on this side of the house? I would ask them, Will you not consider, before you embark in this new crusade, whether the results of those other political crusades in which you have heretofore engaged have been so satisfactory to you as to encourage you to a new venture in the same direction? Great battles you have fought, and fought them manfully. The battle of maintaining civil disabilities on account of religious belief; the battle of resistance to the first Reform Act; the obstinate and long-continued battle of Protection; all these great battles have been fought by the great party that I now look in the face; and, as to some limited portion of those conflicts, I admit my own share of the responsibility. But I ask again, have their results, have their results towards yourselves, been such as that you should be disposed to renew struggles

similar to these? Certainly those who compose the Liberal party in British politics have, at least in that capacity, no reason or title to find fault. The effect of your course has been to give over to your adversaries for five out of every six, or for six out of every seven years, since the epoch of the Reform Act, the conduct and management of public affairs. The effect has been to lower, to reduce, and contract your just influence in the country, and to abridge your legitimate share in the administration of the government. It is good for the public interest that you also should be strong. But if you are to be strong, you can only be so by showing, in addition to the kindness and the personal generosity which I am sure you feel towards the people, a public, a political trust and confidence in the people. What I now say can hardly be said with an evil motive. I am conscious of no such sentiment towards any man or any party. But, sir, we are assailed, and with us the bill, of which we think more seriously than of ourselves. This bill is in a state of crisis and of peril, and the government along with it. We stand or fall with it, as has been declared by my noble friend Lord Russell. We stand with it now; we may fall with it a short time hence. If we do so fall, we, or others in our places, shall rise with it hereafter. I shall not attempt to measure with precision the forces that are to be arrayed against us in the coming issue. Perhaps the great division of to-night is not to be the last, but only the first of a series of divisions. At some point of the contest you may possibly succeed. You may drive us from our seats. You may slay, you may bury the measure that we have introduced. But we will write upon its gravestone for an epitaph this line, with certain confidence in its fulfilment—

"Exoriere aliquis nostris ex ossibus ultor."

You cannot fight against the future. Time is on our side. The great social forces which move onwards in their might and majesty, and which the tumult of these debates does not for a moment impede or disturb—those great social forces are against you; they work with us; they are marshalled in our support. And the banner which we now carry in the fight, though perhaps at some moment of the struggle it may droop over our sinking heads, will yet float again in the eye of heaven, and will be borne by the firm hands of the united people of the three kingdoms, perhaps not to an easy, but to a certain and to a not distant victory. —GLADSTONE.

PROCRASTINATION.

Be wise to-day; 'tis madness to defer;
Next day the fatal precedent will plead,
Thus on, till wisdom is push'd out of life.
Procrastination is the thief of time;
Year after year it steals, till all are fled,
And to the mercies of a moment leaves
The vast concerns of an eternal scene.
If not so frequent, would not this be strange?
That 'tis so frequent, this is stranger still;
Of man's miraculous mistakes this bears
The palm, "That all men are about to live,"
For ever on the brink of being born:
All pay themselves the compliment to think
They one day shall not drivel; and their pride
On this reversion takes up ready praise,
At least their own; their future selves applaud,
How excellent that life they ne'er will lead!
Time lodged in their own hands is Folly's vails;
Time lodged in Fate's, to wisdom they consign;
The thing they can't but purpose, they postpone.
'Tis not in folly not to scorn a fool;
And scarce in human wisdom to do more.
All promise is poor dilatory man,
And that through every stage. When young, indeed,
In full content we sometimes nobly rest,
Unanxious for ourselves, and only wish,
As duteous sons, our fathers were more wise;
At thirty, man suspects himself a fool;
Knows it at forty, and reforms his plan;
At fifty chides his infamous delay,
Pushes his prudent purpose to resolve;
In all the magnanimity of thought
Resolves and re-resolves; then dies the same.
And why? Because he thinks himself immortal.
All men think all men mortal but themselves;
Themselves, when some alarming shock of fate
Strikes through their wounded hearts the sudden dread.
But their hearts wounded, like the wounded air,
Soon close; where, past the shaft, no trace is found.
As from the wing no scar the sky retains,
The parted wave no furrow from the keel—
So dies in human hearts the thought of death:
Even when the tender tear which nature sheds
O'er those we love, we drop it in their grave.

—Young.

MERCY TO ANIMALS.

I WOULD not enter on my list of friends
(Though graced with polish'd manners and fine sense,
Yet wanting sensibility) the man
Who needlessly sets foot upon a worm.
An inadvertent step may crush the snail
That crawls at evening in the public path;
But he that has humanity, forewarn'd,
Will tread aside, and let the reptile live.
The creeping vermin, loathsome to the sight,
And charged, perhaps, with venom, that intrudes,
A visitor unwelcome, into scenes
Sacred to neatness and repose, the alcove,
The chamber, or refectory, may die—
A necessary act incurs no blame.
Not so when, held within their proper bounds,
And guiltless of defence, they range the air,
Or take their pastime in the spacious field:
There they are privileged; and he that hunts
Or harms them there, is guilty of a wrong,
Disturbs the economy of nature's realm,
Who, when she form'd, design'd them an abode.
The sum is this: If man's convenience, health,
Or safety interfere, his rights and claims
Are paramount, and must extinguish theirs.
Else they are all—the meanest things that are—
As free to live, and to enjoy that life,
As God was free to form them at the first,
Who in His sovereign wisdom made them all.
Ye, therefore, who love mercy, teach your sons
To love it too. —COWPER.

THE DEAD ASS.

"AND this," said he, (putting the remains of a crust into his wallet)—"and this should have been *thy* portion," said he, "hadst thou been alive to have shared it with me." I thought, by the accent, it had been an apostrophe to his child, but it was to his ass; and to the very ass we had seen dead on the road, which had occasioned La Fleur's misadventure. The man seemed to lament it much; and it instantly brought into my mind Sancho's lamentation for his; but he did it with more *true* touches of nature.

The mourner was sitting upon a stone bench at the door, with

the ass's pannel and its bridle on one side, which he took up from time to time—then laid them down—looked at them, and shook his head. He then took his crust of bread out of his wallet again as if to eat it, held it some time in his hand—then laid it upon the bit of his ass's bridle—looked wistfully at the little arrangements he had made, and then gave a sigh.

The *simplicity* of his grief drew numbers about him, and La Fleur among the rest, while the horses were getting ready: as I continued sitting in the postchaise, I could see and hear over their heads.

He said he had come last from Spain, where he had been from the farthest borders of Franconia; and had got so far on his return home, when the ass died. Every one seemed desirous to know what business could have taken so *old* and *poor* a man so far a journey from his own home.

It had pleased Heaven, he said, to bless him with three sons, the finest lads in all Germany; but having in one week lost two of them by the small-pox, and the youngest falling ill of the same distemper, he was afraid of being bereft of them all, and made a vow, if Heaven would not take *him* from him also, he would go in gratitude to St. Iago in Spain.

When the mourner got thus far in his story, he stopped, to pay nature her tribute, and wept bitterly.

He said Heaven had accepted the conditions, and that he had set out from his cottage with this poor creature, who had been a *patient partner* of his journey; that it had eaten the same bread with him all the way, and was unto him as a *friend*.

Everybody who stood about heard the poor fellow with concern; La Fleur offered him money. The mourner said he did not want it—it was not the *value* of the ass, but the *loss* of him. The ass, he said he was assured, loved him; and, upon this, told them a long story of a mischance upon their passage over the Pyrenean mountains, which had separated them from each other three days, during which time the ass had sought *him* as much as he had sought the *ass*, and that neither had scarce eaten or drunk till they met.

"Thou hast *one* comfort, friend," said I, "at least, in the loss of thy poor beast; I am sure thou hast been a merciful master to him." "Alas!" said the mourner, "I thought so when he was alive, but now he is dead I think otherwise. I fear the weight of *myself* and my *afflictions* together, have been too much for him; they have shortened the poor creature's days, and I fear

I have them to answer for." Shame on the world! said I to myself. Did we but love *each other* as this poor soul loved his *ass*, 'twould be something. —STERNE.

AN ENGLISH COUNTRY GENTLEMAN.

I TAKE great pleasure in accompanying the squire in his perambulations about his estate, in which he is often attended by a kind of cabinet council. His prime minister, the steward, is a very worthy and honest old man, that assumes a right of way, that is to say, a right to have his own way, from having lived time out of mind on the place. He loves the estate even better than he does the squire, and thwarts the latter sadly in many of his projects of improvement, being a little prone to disapprove of every plan that does not originate with himself.

In the course of one of these perambulations, I have known the squire to point out some important alteration which he was contemplating in the disposition or cultivation of the grounds; this, of course, would be opposed by the steward, and a long argument would ensue over a stile or on a rising piece of ground, until the squire, who has a high opinion of the other's ability and integrity, would be fain to give up the point. This concession, I observed, would immediately mollify the old man, and after walking over a field or two in silence, with his hands behind his back, chewing the cud of reflection, he would suddenly turn to the squire and observe, that "he had been turning the matter over in his mind, and, upon the whole, he believed he would take his honor's advice."

Christy, the huntsman, is another of the squire's occasional attendants, to whom he continually refers all matters of local history, as to a chronicle of the estate, having in a manner been acquainted with many of the trees from the very time they were acorns. Old Nimrod is rather pragmatical in those points of knowledge on which he values himself; but the squire rarely contradicts him, and is, in fact, one of the most indulgent potentates that ever was henpecked by his ministry.

He often laughs about it himself, and evidently yields to these old men more from the bent of his own humor, than from any want of proper authority. He likes this honest independence of old age, and is well aware that these trusty followers love and honor him in their hearts. He is perfectly at ease

about his own dignity and the respect of those around him; nothing disgusts him sooner than any appearance of fawning or sycophancy.

I really have seen no display of royal state that could compare with one of the squire's progresses about his paternal fields and through his hereditary woodlands with several of these faithful adherents about him, and followed by a body-guard of dogs. He encourages a frankness and manliness of deportment among his dependants, and is the personal friend of his tenants, inquiring into their concerns, and assisting them in times of difficulty and hardship. This has rendered him one of the most popular and, of course, one of the happiest of landlords.

Indeed, I do not know a more enviable condition of life than that of an English gentleman of sound judgment and good feelings, who passes the greater part of his time on a hereditary estate in the country. From the excellence of the roads, and the rapidity and exactness of the public conveyances, he is enabled to command all the comforts and conveniences, all the intelligence and novelties of the capital, while he is removed from its hurry and distraction. He has ample means of occupation and amusement within his own domains; he may diversify his time by rural occupations, by rural sports, by study, and by the delights of friendly society collected within his own hospitable halls.

Or if his views and feelings are of a more extensive and liberal nature, he has it greatly in his power to do good, and to have that good immediately reflected back upon himself. He can render essential service to his country by assisting in the disinterested administration of the laws, by watching over the opinions and principles of the lower orders around him, by diffusing among them those lights which may be important to their welfare, by mingling frankly among them, gaining their confidence, becoming the immediate auditor of their complaints, informing himself of their wants, making himself a channel through which their grievances may be quietly communicated to the proper sources of mitigation and relief, or by becoming, if need be, the interpreter and incorruptible guardian of their liberties—the enlightened champion of their rights.

—Washington Irving.

THE SIEGE OF LUCKNOW.

(A.D. 1857.)

THE history of warfare cannot show a nobler instance of determined valor and patient endurance of suffering than that which the story of the siege of Lucknow, from June 30th to September 25th 1857, exhibits. It is one that, with the defence of Kars, must ever be dear to Canadian hearts, since, like General Williams, the gallant officer who assumed the command and conducted the defence of Lucknow from the death of Sir Henry Lawrence, on the 4th of July, till the relief of the city by Outram and Havelock, is a native of the province of Nova Scotia. The following is part of a division order issued by Major-General Sir James Outram, from his head-quarters at Lucknow, on the 5th of October, while waiting for the arrival of reinforcements under Sir Colin Campbell :—

"The Major-General believes that the annals of warfare contain no brighter page than that which will record the bravery, fortitude, vigilance, and patient endurance of hardships, privation, and fatigue displayed by the garrison of Lucknow; and he is very conscious that his unskilled pen must needs fail adequately to convey to the Right Honorable the Governor-General of India, and His Excellency the Commander-in-Chief, the profound sense of the merits of that garrison, which has been forced on his mind by a careful consideration of the almost incredible difficulties with which they have had to contend.

"The term 'illustrious' was well and happily applied by a former Governor-General of India to the garrison of Jellalabad, but some far more laudatory epithet, if such the English language contains, is due, the Major-General considers, to the brave men whom Brigadier Inglis has commanded, with undeviating success and untarnished honor, through the late memorable siege; for while the devoted band of heroes who so nobly maintained the honor of their country's arms under Sir R. Sale were seldom exposed to actual attack, the Lucknow garrison, of inferior strength, have, in addition to a series of fierce assaults gallantly and successfully repulsed, been for three months exposed to a nearly incessant fire from strong and commanding positions, held by an enemy of overwhelming force, possessing powerful artillery, having at their command the whole resources of what was but recently a kingdom, and animated by an insane and bloodthirsty fanaticism."

THE DEATH OF THE LITTLE SCHOLAR.

Without further preface he conducted them into his little schoolroom, which was parlor and kitchen likewise, and told them they were welcome to remain under his roof till morning. The child looked round the room as she took her seat. The chief ornaments of the walls were certain moral sentences, fairly copied in good round text, and well-worked sums in simple addition and multiplication, evidently achieved by the same hand, which were plentifully pasted round the room; for the double purpose, as it seemed, of bearing testimony to the excellence of the school, and kindling a worthy emulation in the bosoms of the scholars. "Yes," said the schoolmaster, observing that her attention was caught by these specimens, "that's beautiful writing, my dear." "Very, sir," replied the child, modestly; "is it yours?" "Mine!" he returned, taking out his spectacles, and putting them on, to have a better view of the triumphs so dear to his heart; "I couldn't write like that now-a-days. No: they are all done by one hand; a little hand it is; not so old as yours, but a very clever one."

As the old schoolmaster said this, he saw that a small blot of ink had been thrown upon one of the copies; so he took a penknife from his pocket, and, going up to the wall, carefully scratched it out. When he had finished he walked slowly backward from the writing, admiring it as one might contemplate a beautiful picture, but with something of sadness in his voice and manner, which quite touched the child, though she was unacquainted with its cause.

"A little hand, indeed," said the poor schoolmaster. "Far beyond all his companions in his learning and his sports too. How did he ever come to be so fond of me? That I should love him is no wonder, but that he should love me"—— And there the schoolmaster stopped, and took off his spectacles to wipe them, as though they had grown dim. "I hope there is nothing the matter, sir?" said Nelly, anxiously.

"Not much, my dear," returned the schoolmaster. "I hoped to have seen him on the green to-night. He was always foremost among them. But he'll be there to-morrow."

"Has he been ill?" asked the child, with a child's quick sympathy.

"Not very. They said he was wandering in his head yester-

day, dear boy, and so they said the day before. But that's a part of that kind of disorder; it's not a bad sign—not at all a bad sign."

The child was silent. He walked to the door, and looked wistfully out. The shadows of the night were gathering, and all was still.

"If he could lean on somebody's arm, he would come to me, I know," he said, returning into the room. "He always came into the garden to say good night. But perhaps his illness has only just taken a favorable turn, and it's too late for him to come out, for it's very damp, and there's a heavy dew. It's much better he shouldn't come to-night."

. . . . . .

The next day, towards night, an old woman came tottering up the garden as speedily as she could, and meeting the schoolmaster at the door, said he was to go to Dame West's directly, and had best run on before her. He and the child were on the point of going out together for a walk, and without relinquishing her hand the schoolmaster hurried away, leaving the messenger to follow as she might.

They stopped at a cottage door, and the schoolmaster knocked softly at it with his hand. It was opened without loss of time. They passed into an inner room, where his infant friend, half dressed, lay stretched upon a bed.

He was a very young boy; quite a little child. His hair still hung in curls about his face, and his eyes were very bright; but their light was of heaven, not earth. The schoolmaster took a seat beside him, and stooping over the pillow, whispered his name. The boy sprang up, threw his wasted arms around his neck, crying out that he was his dear, kind friend.

"I hope I always was. I meant to be, God knows," said the poor schoolmaster.

"Who is that?" said the boy, seeing Nell. "I am afraid to kiss her, lest I should make her ill. Ask her to shake hands with me."

The sobbing child came closer up, and took the little languid hand in hers. Releasing his again after a time, the sick boy laid him gently down.

"You remember the garden, Harry," whispered the schoolmaster, anxious to rouse him, for a dulness seemed gathering upon the child, "and how pleasant it used to be in the evening? You must make haste to visit it again, for I think the very

flowers have missed you, and are less gay than they used to be. You will come soon, my dear, very soon now, won't you?"

The boy smiled faintly, so very, very faintly, and put his hand upon his friend's gray head. He moved his lips, too, but no voice came from them; no, not a sound.

In the silence that ensued, the hum of distant voices, borne upon the evening air, came floating through the open window.

"What's that?" said the sick child, opening his eyes.

"The boys at play upon the green."

He took a handkerchief from his pillow, and tried to wave it above his head. But the feeble arm dropped powerless down.

"Shall I do it?" said the schoolmaster.

"Please wave it at the window," was the faint reply. "Tie it to the lattice. Some of them may see it there. Perhaps they'll think of me, and look this way."

He raised his head, and glanced from the fluttering signal to his idle bat, that lay, with slate and book, and other boyish property, upon a table in the room. And then he laid him down softly once more, and asked if the little girl were there, for he could not see her.

She stepped forward, and pressed the passive hand that lay upon the coverlet. The two old friends and companions—for such they were, though they were man and child—held each other in a long embrace, and then the little scholar turned his face towards the wall, and fell asleep.

The poor schoolmaster sat in the same place, holding the small, cold hand in his, and chafing it. It was but the hand of a dead child. He felt that; and yet he chafed it still, and could not lay it down.

—DICKENS.

THE RUINED LODGE.

AFTER leaving Halifax, the road to Windsor winds for ten miles round the margin of Bedford Basin, which is connected with the harbor by a narrow passage at the dockyard. It is an extensive and magnificent sheet of water, the shores of which are deeply indented with numerous coves and well-sheltered inlets of great beauty.

At the distance of seven miles from the town is a ruined lodge, built by his royal highness the late Duke of Kent, when commander-in-chief of the forces in this colony, once his favorite summer residence, and the scene of his munificent hospitalities.

It is impossible to visit this spot without the most melancholy feelings. The tottering fence, the prostrate gates, the ruined grottoes, the long and winding avenues, cut out of the forest, overgrown by rank grass and occasional shrubs, and the silence and desolation that pervade everything around, all bespeak a rapid and premature decay, recall to mind the untimely fate of its noble and lamented owner, and tell of fleeting pleasures and the transitory nature of all earthly things. I stopped at a small inn in the neighborhood, for the purpose of strolling over it for the last time ere I left the country, and for the indulgence of those moralizing musings which at times harmonize with our nerves, and awaken what may be called the pleasurable sensations of melancholy.

A modern wooden ruin is of itself the least interesting, and at the same time the most depressing, object imaginable. The massive structures of antiquity that are everywhere to be met with in Europe exhibit the remains of great strength, and, though injured and defaced by the slow and almost imperceptible agency of time, promise to continue thus mutilated for ages to come. They awaken the images of departed generations, and are sanctified by legend and by tale. But a wooden ruin shows rank and rapid decay, concentrates its interest on one family or one man, and resembles a mangled corpse, rather than the monument that covers it. It has no historical importance, no ancestral record. It awakens not the imagination. The poet finds no inspiration in it, and the antiquary no interest. It speaks only of death and decay, of recent calamity, and vegetable decomposition. The very air about it is close, dank, and unwholesome. It has no grace, no strength, no beauty, but looks deformed, gross, and repulsive. Even the faded color of a painted wooden house, the tarnished gilding of its decorations, the corroded iron of its fastenings, and its crumbling materials, all indicate recent use and temporary habitation. It is but a short time since this mansion was tenanted by its royal master, and in that brief space how great has been the devastation of the elements! A few years more and all trace of it will have disappeared for ever. Its very site will soon become a matter of doubt. The forest is fast reclaiming its own, and the lawns and ornamented gardens, annually sown with seeds scattered by the winds from the surrounding woods, are relapsing into a state of nature, and exhibiting in detached patches a young growth of such trees as are common to the country.

As I approached the house, I noticed that the windows were broken out, or shut up with rough boards to exclude the rain and snow; the doors supported by wooden props instead of hinges, which hung loosely on the panels; and that long luxuriant clover grew in the eaves, which had been originally designed to conduct the water from the roof, but, becoming choked with dust and decayed leaves, had afforded sufficient food for the nourishment of coarse grasses. The portico, like the house, had been formed of wood, and the flat surface of its top, imbibing and retaining moisture, presented a mass of vegetable matter, from which had sprung up a young and vigorous birch tree, whose strength and freshness seemed to mock the helpless weakness that nourished it. I had no desire to enter the apartments; and, indeed, the aged ranger, whose occupation was to watch over its decay, and to prevent its premature destruction by the plunder of its fixtures and more durable materials, informed me that the floors were unsafe. Altogether, the scene was one of a most depressing kind.

A small brook, which had by a skilful hand been led over several precipitous descents, performed its feats alone and unobserved, and seemed to murmur out its complaints as it hurried over its rocky channel to mingle with the sea; while the wind, sighing through the umbrageous wood, appeared to assume a louder and more melancholy wail as it swept through the long vacant passages and deserted saloons, and escaped in plaintive tones from the broken casements. The offices, as well as the ornamental buildings, had shared the same fate as the house. The roofs of all had fallen in, and mouldered into dust; the doors, sashes, and floors had disappeared; and the walls only, which were in part built of stone, remained to attest their existence and use. The grounds exhibited similar effects of neglect, in a climate where the living wood grows so rapidly, and the dead decays so soon, as in Nova Scotia. An arbor, which had been constructed of lattice-work, for the support of a flowering vine, had fallen, and was covered with vegetation; while its roof alone remained, supported aloft by limbs of trees that, growing up near it, had become entangled in its net-work. A Chinese temple, once a favorite retreat of its owner, as if in conscious pride of its preference, had offered a more successful resistance to the weather, and appeared in tolerable preservation; while one small surviving bell, of the numerous ones that once ornamented it, gave out its solitary and melancholy tinkling as it waved in the

wind. How sad was its mimic knell over pleasures that were fled for ever!

The contemplation of this deserted house is not without its beneficial effect on the mind; for it inculcates humility to the rich, and resignation to the poor. However elevated man may be, there is much in his condition that reminds him of the infirmities of his nature, and reconciles him to the decrees of Providence. "May it please your majesty," said Euclid to his royal pupil, "there is no regal road to science. You must travel in the same path with others, if you would attain the same end." These forsaken grounds teach us in similar terms this consolatory truth, that there is no exclusive way to happiness reserved even for those of the most exalted rank. The smiles of fortune are capricious, and sunshine and shade are unequally distributed; but though the surface of life is thus diversified, the end is uniform to all, and invariably terminates in the grave.

Ruins, like death, of which they are at once the emblem and the evidence, are apt to lose their effect from their frequency. The mind becomes accustomed to them, and the moral is lost. The picturesque alone remains predominant, and criticism supplies the place of reflection. But this is the only ruin of any extent in Nova Scotia, and the only spot either associated with royalty, or set apart and consecrated to solitude and decay. The stranger pauses at a sight so unusual, and inquires the cause; he learns with surprise that this place was devoted exclusively to pleasure; that care and sorrow never entered here; and that the voice of mirth and music was alone heard within its gates. It was the temporary abode of a prince—of one, too, had he lived, that would have inherited the first and fairest empire in the world. All that man can give or rank enjoy awaited him; but an overruling and inscrutable Providence decreed, at the very time when his succession seemed most certain, that the sceptre should pass into the hands of another. This intelligence interests and excites his feelings. He enters, and hears at every step the voice of nature proclaiming the doom that awaits alike the prince and the peasant. The desolation he sees appals him. The swallow nestles in the empty chamber, and the sheep find a noonday shelter in the banqueting-room, while the ill-omened bat rejoices in the dampness of the mouldering ruins. Everything recalls a recollection of the dead; every spot has its record of the past; every path its footstep; every tree its legend; and even the universal silence that reigns here has an awful eloquence

that overpowers the heart. Death is written everywhere. Sad and dejected, he turns and seeks some little relic, some small memorial of his deceased prince, and a solitary, neglected garden-flower, struggling for existence among the rank grasses, presents a fitting type of the brief existence and transitory nature of all around him. As he gathers it, he pays the silent but touching tribute of a votive tear to the memory of him who has departed, and leaves the place with a mind softened and subdued, but improved and purified, by what he has seen. —HALIBURTON.

THE MENTAL SCIENCES.

ALL systems of knowledge are the accumulations of that power to which your attention has already been directed, the human mind. If there is found any order or beauty in the arrangement of information under such systems, these result from the constitution of the mind that made the arrangement. Every thought that passes through our minds is formed after a certain model, is constituted in accordance with the laws which the mind imposes upon it. Thus, when we think "Alexander the Great was a conqueror," we form what is termed a judgment, consisting of a subject, *Alexander the Great*, a predicate or attribute, *a conqueror*, and a copula or connecting link, *was*. Again, when we reason thus—

All stones are heavy,
Flint is a stone;
Therefore, flint is heavy,

we pursue a mode of argument called a *syllogism*, from a Greek word which means *reckoning together*. Finally, although this is generally placed first, we divide all the objects of thought into several classes. Now, what is one object in nature may be a whole class of objects in thought; as, for instance, we may think of a piece of gold as a substance, as yellow, as our own, as one ounce in weight, as seen at a certain time and in a certain place, and so on. Each of these is a separate object of thought, and would be classified as substance, quality, relation, quantity, &c. There are many other ways in which the objects of thought or *conception*, as they are called, may be regarded. It appears, therefore, that thought consists of three elements, namely, conception, judgment, and reasoning. These three elements are the objects of the Science of Logic, which deals with the laws that

govern thought. The word logic is from the Greek, and signifies *pertaining to reason*, or *discourse*, for it is by speech that our reasoning powers are manifested.

In order to think at all, it is necessary that we should have something to think about. If we examine our thoughts, we will find that they are occupied principally with the objects that appear, and the circumstances that take place in the world. These make impressions upon our senses; and our minds, which are not enclosed in the brain, but are present in every part of our organism, perceive or become conscious of them. The impression, we call *sensation*, and the act of perceiving, *perception*. But if our knowledge of things depended upon these alone, we should not at any one time have more thoughts in our minds than were excited by present facts and phenomena. This, however, we know not to be the case, since, if it were so, there could be no such thing as learning; and the reason why it is not so is, that we possess a faculty called *memory*. In addition to sensation, perception, and memory, we have a faculty of *conception* or *imagination*, whereby we can call up before our minds things that we have never perceived; and others, perhaps, that never existed. There are many other faculties, such as comparison, analysis, composition, abstraction, and judgment; all these belong to what is called the understanding, and are the faculties most in use among men in general. It is asserted, however, by some philosophers, or *lovers* of *wisdom*, as the term means, and denied as strenuously by others, that there is in man a higher principle than that of understanding—namely, reason, whereby he receives ideas and trains of thought not suggested by the external world at all. These ideas and trains of thought refer to three great subjects, about which we can otherwise gain little information, and which are the Soul, the Universe, and God. When philosophers say that we can know little upon these subjects with certainty, otherwise than by reason, they do not mean to set aside our observations upon the workings of our own minds, and the emotions of the soul, nor to call in question the testimony of our senses to all that we perceive in the external world, or of our minds, to what they infer from it; nor yet is it their intention to disparage the revelation which God has made to man; but they look upon reason as the only source of demonstrative knowledge, or, in other words, of knowledge that may be proved as conclusively as an exercise in arithmetic, or a problem in the higher mathematics. They distinguish, therefore, between the

knowledge we have of these three great subjects by means of our senses, by calling it *empirical*, from a Greek word which signifies *pertaining to experience*, and that which is brought to us by reason, which they call *rational*, a Latin word that means *pertaining to reason*.

After these explanations, you will understand the two points of view from which the following sciences are to be regarded. We have, first, the science of the Soul, or Psychology, a Greek word meaning simply *a discourse about the soul*. Empirical psychology is that division which treats of the faculties of the mind alluded to above, and all the powers and emotions which go to make up the spiritual nature of man; everything in this half is gained by observation or experience. But rational psychology says, What is the soul? Is it one and simple, or does it consist of many parts? Can it be increased or diminished? Such are a few of the questions which rational psychology puts to itself and attempts to solve—questions, you will perceive, that no amount of observation could throw any light upon.

The next science is that of the Universe, or Cosmology, from a Greek word signifying *a discourse about the world*. That part of the science which is included under the physical sciences is empirical cosmology, since these sciences are built up from observations made by the senses. There is, however, a science of rational cosmology, which seeks to discover the origin of the world and of the universe which contains it, to know whether these are eternal, and whether their component parts can be annihilated or not. It also inquires into the nature of what we call *matter and force*, as distinguished from mind, and takes up all these questions concerning material things which cannot be solved by the exercise of any lower power than that of the supposed reason.

The third and the greatest subject of philosophy is God, the Infinite Being, creating, preserving, and governing all things. The science which aims at a knowledge of One whose humblest attribute so far transcends the most exalted conceptions of the human mind, is called Theology; also from the Greek, and meaning *a discourse about God*. Empirical theology is that knowledge of God which we gain by means of natural theology, or the evidences of a wise, almighty, and beneficent First Cause, visible in the works of nature and of Revelation, the method by which He has deigned to make Himself known to our rebellious race. Rational theology is a science which we can suppose little or no

necessity for, now that Revelation dispenses with reason's shadowy light, although in the time of the Greek and Roman philosophers, who had no Word of God to shine upon their path, such a science was not only legitimate, but worthy of all respect.

The three sciences of Rational Psychology, Rational Cosmology, and Rational Theology, are generally ranked under the one head of Metaphysics, a word which I shall proceed to explain. When the celebrated philosopher Aristotle, who flourished about three hundred and fifty years before Christ, had completed a treatise upon physics, or the physical sciences as he understood them, he added thereto a small collection of writings upon the first principles of all things, such as you have found the three rational sciences to be concerned with. These detached writings have no particular title; and, accordingly, when almost three hundred years later Andronicus of Rhodes set himself to work to arrange the productions of the great philosopher, he placed this small collection next in order to the physics, calling them *meta-ta-physica*, or *after the physics*, whence we derive that bone of contention among the learned, and bugbear to ignorant people, the word metaphysics.

Under the general title of the mental sciences is frequently ranked one which we have considered in our last lesson, the science of ethics or morals. Since the terms social and mental by no means exclude one another, forming what is called an illogical division, the fact of ethics belonging to both divisions is not to be wondered at. It is unnecessary to say more upon a subject which has already received a considerable share of our attention.

The last of the mental sciences, and the one with which our lessons upon systems of knowledge conclude, is that which deals with the painful or pleasurable sensations we experience in gazing upon works of nature and art. Thus, a beautiful landscape or painting, the harmonious sound of a musical performance, or a group of statuary, excite in the well-instructed breast feelings of admiration and reverence akin to devotion, while other objects in which an element called "taste" seems to be wanting, are looked upon with indifference or disgust. With such emotions, with that which excites those of a pleasurable nature, and which we call beauty, with the fine arts and kindred subjects, the science of Æsthetics is concerned. Æsthetics is a Greek word, and means literally *pertaining to sensation or perception*, although it is now understood as applying, exclusively, to the per-

ception of beauty in nature and art, and the sensations excited in man by that perception.

The Mental Sciences.

1. Logic.
2. Metaphysics. { Empirical Psychology. / Empirical Cosmology. / Empirical Theology. } { Rational Psychology. / Rational Cosmology. / Rational Theology. }
3. Ethics.
4. Æsthetics.

All the sciences are included under the one title of Philosophy, a Greek word meaning *the love of wisdom.* If we would aspire to any position of importance among our fellow-men, we must learn to study our own mind. The mind is the instrument with which we acquire all knowledge; and it is, therefore, of the highest importance, that that instrument should be in good condition. The mower, who gathers in the golden harvest, looks well to his scythe, that it be right and sharp, lest he throw away his strength to no purpose, so if we would reap a plentiful crop of knowledge, our minds must be completely furnished for their task, and be kept bright, sharp, and shining by constant use.

You have now before you a complete map of the great domain of science. It is, however, only an outline map. You yourselves must fill up its broad blank spaces with facts and figures, names and dates, reasons and arguments, the accumulation of past years and centuries. Who knows but that in time to come your own name may shine forth upon the page of some one of its divisions as a benefactor of the human race, and a contributor to the completeness of these systems of knowledge which we have so pleasantly surveyed together?

—*Campbell's Sixth Reader.*

A SCENE AT OSWEGO.

When Mabel, quitting the convenient but comparatively retired hut where her father had been permitted to place her, issued into the pure air of the morning, she found herself at the foot of a bastion, that lay invitingly before her, with a promise of giving a *coup d'œil* of all that had been concealed in the darkness of the preceding night. Tripping up the grassy ascent, the light-hearted as well as light-footed girl found herself at once on a point

where the sight, at a few varying glances, could take in all the external novelties of her new situation. To the southward lay the forest through which she had been journeying so many weary days, and which had proved so full of dangers. It was separated from the stockade by a belt of open land, that had been principally cleared of its woods to form the martial constructions around her. This glacis, for such in fact was its military uses, might have covered a hundred acres, but with it every sign of civilization ceased. All beyond was forest; that dense, interminable forest that Mabel could now picture to herself, through her recollections, with its hidden glassy lakes, its dark streams, and its world of nature! Turning from this view, our heroine felt her cheek fanned by a fresh and grateful breeze, such as she had not experienced since quitting the far-distant coast. Here a new scene presented itself; although expected, it was not without a start, and a low exclamation of pleasure, that the eager eyes of the girl drunk in its beauties. To the north, and east, and west, in every direction, in short, over one entire half of the novel panorama, lay a field of rolling waters. The element was neither of that glassy green which distinguishes the American waters in general, nor yet of the deep blue of the ocean; the color being of a slightly amber hue, that scarcely affected its limpidity. No land was to be seen, with the exception of the adjacent coast, which stretched to the right and left, in an unbroken outline of forest, with wide bays and low headlands or points; still much of the shore was rocky, and into its caverns the sluggish waters occasionally rolled, producing a hollow sound, that resembled the concussions of a distant gun. No sail whitened the surface, no whale or other fish gambolled on its bosom, no sign of use or service rewarded the longest and most minute gaze at its boundless expanse. It was a scene, on one side, of apparently endless forests, while a waste of seemingly interminable water spread itself on the other. Nature had appeared to delight in producing grand effects, by setting two of her principal agents in bold relief to each other, neglecting details; the eye turning from the broad carpet of leaves to the still broader field of fluid, from the endless but gentle heavings of the lake to the holy calm and poetical solitude of the forest, with wonder and delight. Mabel Dunham, though unsophisticated, like most of her countrywomen of that period, and ingenuous and frank as any warm-hearted girl well could be, was not altogether without a feeling for the poetry of this beautiful earth of ours. Although

she could scarcely be said to be educated at all—for few of her sex, at that day, and in this country, received much more than the rudiments of plain English instruction—still she had been taught much more than was usual for young women in her own station in life, and, in one sense certainly, she did credit to her teaching. The widow of a field officer, who formerly belonged to the same regiment as her father, had taken the child in charge at the death of its mother, and under the care of this lady, Mabel had acquired some tastes, and many ideas, which otherwise might always have remained strangers to her. Her situation in the family had been less that of a domestic than of a humble companion, and the results were quite apparent in her attire, her language, her sentiments, and even in her feelings, though neither, perhaps, rose to the level of those which would properly characterize a lady. She had lost the coarser and less refined habits and manners of one in her original position, without having quite reached a point that disqualified her for the situation in life that the accidents of birth and fortune would properly compel her to fill. All else that was distinctive and peculiar in her belonged to natural character. With such antecedents it will occasion the reader no wonder if he learns that Mabel viewed the novel scene before her with a pleasure far superior to that produced by vulgar surprise. She felt its ordinary beauties as most would have felt them, but she had also a feeling for its sublimity; for that softened solitude, that calm grandeur and eloquent repose that ever prevade broad views of natural objects which are yet undisturbed by the labors and struggles of man. —COOPER.

HISTORY IN WORDS.

HAVING dedicated this lecture to the history which is in words, I can have no fitter opportunity of urging upon you the importance of seeking in every case to acquaint yourselves with the circumstances under which any body of men who have played an important part in history, especially in the history of your own land, obtained the name by which they were afterwards willing to be known, or which was used for their designation by others. This you may do as a matter of historical inquiry, and keeping entirely aloof in spirit from the scorn, the bitterness, the falsehood, the calumny out of which very often this name was first imposed. Whatever of evil may have been at work in them that coined,

or gave currency to, the name, the name itself can never, without serious loss, be neglected by those who would truly understand the moral significance of the thing; there is always something, often very much, to be learned from it. Learn, then, in regard of each one of these names which you may meet in your studies, whether it was one which men gave to themselves, or one imposed on them by others, and which they never recognized; or one which, being first imposed by others, was yet in course of time admitted and accepted by themselves. We have examples in all these kinds. Thus the "Gnostics" called *themselves* such; the name was of their own devising, and one in which they boasted. In like manner, the "Cavaliers" of our civil war. "Quaker," "Puritan," "Roundhead," were all, on the contrary, names devised by others, and never accepted by those to whom they were attached; while "Whig" and "Tory" were nicknames originally of bitterest scorn and party hate, given by two political bodies in England to one another, which, however, in course of years, lost what was offensive in them, until they came to be accepted and employed by the very parties themselves. The German "Lutherans" were first so called by their antagonists. The same we may say of "Methodists;" this name was certainly not first taken by the followers of Wesley, but imposed on them by others, while yet they have been subsequently willing to accept and to be known by it. "Capuchin" was in like manner a jesting name, first given by the boys in the streets to that branch of the Franciscans which afterwards accepted it as their proper designation. It was provoked by the peaked and pointed hood (capucho) which they wore.

Now of these titles, and of many more that might be adduced, some undoubtedly, like the last, had their rise in mere external accident, and stand in no essential connexion with those that bear them; and these names, though seldom without their instruction, yet plainly are not *so* instructive as others, in which the innermost heart of a system speaks out and reveals itself; so that, having mastered the name, we have placed ourselves at the central point from which we shall best master everything besides. Thus, for instance, is it with "Gnostic" and "Gnosticism;" in the prominence given to *gnosis*, or knowledge, as opposed to faith, lies the key to the whole system. And I may say generally, that almost all the sects and parties, religious and political, which have risen up in times past in England, are known by names that will repay study—by names, to understand which

will bring us far to an understanding of their strength and their weakness, their truth and their error, the idea and intention according to which they wrought. "Puritans," "Fifth-Monarchy Men," "Seekers," "Levellers," "Independents," "Friends," "Rationalists," "Latitudinarians," "Freethinkers;" these titles, with many more, have each its significance; and would you understand what the men themselves meant, you must first understand what they were called. From this must be your point of starting; even as you must bring back to this whatever further information you may gain; and though I will not say that you must always subordinate it to the name, yet you must ever put it in relation and connexion with that.

You will often be able to glean knowledge from the names of things, if not as important as that I have just been speaking of, yet curious and interesting. What a record of inventions is preserved in the names which so many articles bear, of the place from which they first came, or the person by whom they were first invented! The "magnet" has its name from Magnesia; the "baldachin" from "Baldacco," the Italian name of Bagdad, it being from that city that the costly silk which composed this canopy originally came. The "bayonet" tells us that it was first made at Bayonne; "worsted," that it was first spun at a village so called, in the neighborhood of Norwich; "sarsnet," that it is a Saracen manufacture; "cambric," that it reached us from Cambray; "crape," from Cyprus, (the earlier form of the word is "cypres;") "copper," also, that it drew its name from this same island, so richly furnished with mines of this metal; "diaper," that it came from Ypres; "damask," from Damascus; the damson is also the "damascene," or Damascus plum; "arras," from Arras; "dimity," from Damietta; "cordwain" or "cordovan," from Cordova; "currants," from Corinth; "delf," from Delft; "indigo," (indicum,) from India; "agates," from a Sicilian river, Achates; "jalap," from Xalapa, a town in Mexico; "jane," from Genoa; "parchment," from Pergamum; the "bezant," so often named in our early literature, from Byzantium, being a Byzantine coin; the "guinea," that it was originally coined (in 1663) of gold brought from the African coast so called; "camlet," that it was woven, at least in part, of camel's hair. The fashion of the cravat was borrowed from the Croats, or "Crabats," as they used in the seventeenth century to be called. The "biggen," a plain cap often mentioned by our early writers, was first worn by the Beguines, communities of

pietist women in the middle ages, and had its name from them. Such has been the manufacturing progress of England, that we now send our calicoes and muslins to India and the East; yet the words give standing witness that we once imported them from thence; for "calico" is from Calicut, and "muslin" from Moussul, a city in Asiatic Turkey. "Ermine" is the spoil of the Armenian rat; "sherry," or "sherris," as Shakespeare wrote it, is sent us from Xeres, and "port," from Oporto; the "pheasant" came to us from the banks of the Phasis; the "cherry" was brought by Lucullus from Cerasus, a city in Pontus; the "peach" declares itself by its name to be a Persian fruit; "spaniels" are from Spain.

It is true, indeed, that occasionally a name will embody and give permanence to an error; as when in "America," the honor of discovering the New World, which belonged to Columbus, has been transferred to another eminent discoverer, but one who had no title to this praise, and, as Humboldt has lately abundantly shown, was entirely guiltless of any attempt to usurp it for himself. So, too, the "turkey" in our farmyards seems to claim Turkey for its home, and the assumption that it was from thence no doubt caused it to be so called; while, indeed, it was unknown in Europe until introduced from the New World, where alone it is indigenous. This error the French in another shape repeat, calling it "*dinde*," originally "poulet *d'Inde*," or Indian fowl. In like manner, "gypsies" appears to imply that Egypt was the country to which these wanderers originally belonged, and from which they had migrated westward; and certainly it was so believed in many parts of Europe at their first appearance in the beginning of the fifteenth century, and hence this title. It is now, however, clearly made out, their language leaving no doubt of the fact, that they are an outcast tribe which has wandered hither from a more distant land—from India itself. "Bohemians," the French appellation of gypsies, involves an error similar to ours; they were taken at first by the common people in France to be the expelled Hussites of Bohemia, and hence this name. In the German "Zigeuner," there is no expression of the land from which they were presumed to have come; but if this word be "Zieh-Gauner,"—that is, "roaming thieves,"—it will indicate the evil repute in which, from the very beginning, they were held.

And where words have not, as in these cases, embodied an error, it will yet sometimes happen that the sound or spelling of

a word will *to us* possibly suggest a wrong explanation, against which in these studies we shall need to be on our guard. I dare-say that there has been a stage in most boys' geographical knowledge when they have taken it for granted that Jutland was so called, not because it was the land of the Jutes, but on account of its *jutting* out into the sea in so remarkable a manner. And there have not been wanting those who have ventured to trace in the name "Jove" a heathen reminiscence of the awful name of Jehovah. I will not enter into this here; sufficient to say that, however specious this at first sight may seem, yet on closer examination of the two words every connexion between them disappears.

Sometimes the assumed derivation has reacted upon and modified the spelling. Thus the name of the Caledonian tribe whom we call the "Picts" would probably have come down to us in a somewhat different form, but for the assumption which early rose up, that they were so called from the custom of staining or painting their bodies—that, in fact, "Picts" meant "the painted." This, as is now acknowledged, is an exceedingly improbable supposition. It would be quite conceivable that the Romans should have given this name to the *first* barbarous tribe they encountered who were in the habit of painting themselves thus. Such a custom, forcing itself on the eye, and impressing itself on the imagination, is exactly that which gives birth to a name. But after they had been long familiar with the tribes in southern Britain, to whom this painting or tatooing was equally familiar, it is quite inconceivable that they should have applied it to one of the northern tribes in the island, with which they first came in contact at a far later day. The name is much more probably the original Celtic one belonging to the tribe, slightly altered in the mouths of the Romans. It may have been the same with "hurricane;" for many have imagined that this word, being used especially to signify the West Indian tornado, must be derived from the tearing up and *hurrying* away of the *canes* in the sugar plantations—just in the same way as the Latin "calamitus" has been drawn, but erroneously, from "calamus," the stalk of the corn. In both cases the etymology is faulty; "hurricane" is only a transplanting into our tongue of the Spanish "hurracan" or the French "ouragan."

It is a signal evidence of the conservative powers of language, that we oftentimes trace in speech the records of customs and states of society which have now passed so entirely away as to

survive nowhere else but in these words alone. For example, a "stipulation," or agreement, is so called, as many tell us, from "stipula," a straw, and with reference to a Roman custom of breaking a straw between them when two persons would make a mutual engagement with one another. And we all know how important a fact of English history is laid up in "curfew," or "couvre-feu." The "limner," or "lumineur," (luminatore,) brings us back to a period when the *illumination* of manuscripts was the leading occupation of the painter, so that from this work he derived his name. "Thrall" and "thraldom" descend to us from a period when it was the custom to *thrill*, or drill the ear of a slave in token of servitude, a custom in use among the Jews, (Deut. xv. 17,) and retained by our Anglo-Saxon forefathers, who were wont thus to pierce at the church-door the ears of their bond-servants. By "lumber" we are, or might be, taught that Lombards were the first pawnbrokers, even as they were the first bankers in England, a "lumber"-room being a "lombard"-room, or room where the pawnbroker stored his pledges. Nor need I do more than remind you that in our common phrase of "*signing* our name," we preserve a record of a time when the first rudiments of education, such as the power of writing, were the portion of so few, that it was not as now the exception, but the custom for most persons to make their mark or "sign," great barons and kings themselves not being ashamed to set this *sign*, or cross, to the weightiest documents. We more accurately express what we now do when we speak of "subscribing the name." Then, too, whenever we term arithmetic the science of "calculation," we in fact allude to that rudimental period of the science of numbers when pebbles (calculi) were used, as now among savages they often are, to facilitate the practice of counting. The Greeks did the same in their word ψηφίζειν, as in another word of theirs (πεμπάζειν) record of a period was kept when the *five* fingers were so employed. "Expend," "expense," tells us that money was once weighed out, and not counted out, as now, (Gen. xxxiii. 16). In "library," we preserve the fact that books were once written on the bark (liber) of trees; as in "paper," of a somewhat later period, when the Egyptian papyrus, "the paper reeds by the brooks," furnished the chief material for writing.

Theories, too, which long since were utterly renounced, have yet left their traces behind them. Thus the words "good humor," "bad humor," "humors," and, strangest contradiction of all, "*dry* humor," rest altogether on a now exploded but

a very old and widely-extended theory of medicine, according to which there were four principal moistures or "humors" in the natural body, on the due proportion and combination of which the disposition alike of body and mind depended. And "temper," as used by us now, has its origin in the same theory: the due admixture or right "tempering" of these gave what was called the happy temper, or mixture, which, thus existing inwardly, manifested itself also outwardly. In the same manner "distemper," which we still employ in the sense of sickness, was that evil frame either of a man's body or of his mind, (for it was used alike of both,) which had its rise in an unsuitable mingling of these humors. In these instances, as in many more, the great streams of thought and feeling have changed their course, and now flow in quite other channels from those which once they filled, but have left these words as lasting memorials of the channels in which once they ran.

—Trench's *Study of Words.*

LETTER TO THE EARL OF CHESTERFIELD.

My Lord,—I have been lately informed, by the proprietor of the *World*, that two papers in which my Dictionary is recommended to the public were written by your lordship. To be so distinguished is an honor, which, being very little accustomed to favors from the great, I know not well how to receive, or in what terms to acknowledge.

When, upon some slight encouragement, I first visited your lordship, I was overpowered, like the rest of mankind, by the enchantment of your address, and could not forbear to wish that I might boast myself *Le vainqueur du vainqueur de la terre;* that I might obtain that regard for which I saw the world contending; but I found my attendance so little encouraged, that neither pride nor modesty would suffer me to continue it. When I had once addressed your lordship in public, I had exhausted all the art of pleasing which a retired and uncourtly scholar can possess. I had done all that I could; and no man is well pleased to have his all neglected, be it ever so little.

Seven years, my lord, have now passed since I waited in your outward rooms, or was repulsed from your door; during which time I have been pushing on my work through difficulties, of which it is useless to complain, and have brought it at last to

the verge of publication, without one act of assistance, one word of encouragement, or one smile of favor. Such treatment I did not expect, for I never had a patron before.

The shepherd in Virgil grew at last acquainted with Love, and found him a native of the rocks.

Is not a patron, my lord, one who looks with unconcern on a man struggling for life in the water, and when he has reached the ground, encumbers him with help? The notice which you have been pleased to take of my labors, had it been early, had been kind; but it has been delayed till I am indifferent, and cannot enjoy it; till I am solitary, and cannot impart it; till I am known, and do not want it. I hope it is no very cynical asperity not to confess obligations where no benefit has been received, or to be unwilling that the public should consider me as owing that to a patron which Providence has enabled me to do for myself.

Having carried on my work thus far with so little obligation to any favorer of learning, I shall not be disappointed though I should conclude it, if less be possible, with less, for I have been long wakened from that dream of hope in which I once boasted myself with so much exultation, my lord, your lordship's most humble, most obedient servant, SAMUEL JOHNSON.

TO HIS GRACE THE DUKE OF BEDFORD.

MY LORD,—You are so little accustomed to receive any marks of respect or esteem from the public, that if, in the following lines, a compliment or expression of applause should escape me, I fear you would consider it as a mockery of your established character, and, perhaps, an insult to your understanding. You have nice feelings, my lord, if we may judge from your resentments. Cautious, therefore, of giving offence, where you have so little deserved it, I shall leave the illustration of your virtues to other hands. Your friends have a privilege to play upon the easiness of your temper, or possibly they are better acquainted with your good qualities than I am. You have done good by stealth. The rest is upon record. You have still left ample room for speculation, when panegyric is exhausted.

You are, indeed, a very considerable man. The highest rank, a splendid fortune, and a name glorious till it was yours, were sufficient to have supported you with meaner abilities than I

think you possess. From the first you derived a constitutional claim to respect; from the second, a natural extensive authority; the last created a partial expectation of hereditary virtues. The use you have made of these uncommon advantages might have been more honorable to yourself, but could not be more instructive to mankind. We may trace it in the veneration of your country, the choice of your friends, and in the accomplishment of every sanguine hope which the public might have conceived from the illustrious name of Russell.

The eminence of your station gave you a commanding prospect of your duty. The road which led to honor was open to your view. You could not lose it by mistake, and you had no temptation to depart from it by design. Compare the natural dignity and importance of the richest peer of England;—the noble independence, which he might have maintained in parliament, and the real interest and respect, which he might have acquired, not only in parliament, but through the whole kingdom; compare these glorious distinctions with the ambition of holding a share in government, the emoluments of a place, the sale of a borough, or the purchase of a corporation; and though you may not regret the virtues which create respect, you may see, with anguish, how much real importance and authority you have lost. Consider the character of an independent, virtuous Duke of Bedford; imagine what he might be in this country, then reflect one moment upon what you are. If it be possible for me to withdraw my attention from the fact, I will tell you in theory what such a man might be.

Conscious of his own weight and importance, his conduct in parliament would be directed by nothing but the constitutional duty of a peer. He would consider himself as a guardian of the laws. Willing to support the just measures of government, but determined to observe the conduct of the minister with suspicion, he would oppose the violence of faction with as much firmness as the encroachments of prerogative. He would be as little capable of bargaining with the minister for places for himself, or his dependants, as of descending to mix himself in the intrigues of opposition. Whenever an important question called for his opinion in parliament, he would be heard, by the most profligate minister, with deference and respect. His authority would either sanctify or disgrace the measures of Government. The people would look up to him as to their protector, and a virtuous prince would have one honest man in his dominions in whose integrity

and judgment he might safely confide. If it should be the will of Providence to afflict him with a domestic misfortune, he would submit to the stroke with feeling, but not without dignity. He would consider the people as his children, and receive a generous, heartfelt consolation in the sympathizing tears and blessings of his country.

Your grace may probably discover something more intelligible in the negative part of this illustrious character. The man I have described would never prostitute his dignity in parliament by an indecent violence either in opposing or defending a minister. He would not at one moment rancorously persecute, at another basely cringe to the favorite of his sovereign. After outraging the royal dignity with peremptory conditions, little short of menace and hostility, he would never descend to the humility of soliciting an interview with the favorite, and of offering to recover, at any price, the honor of his friendship. Though deceived perhaps in his youth, he would not, through the course of a long life, have invariably chosen his friends from among the most profligate of mankind. His own honor would have forbidden him from mixing his private pleasures or conversation with jockeys, gamesters, blasphemers, gladiators, or buffoons. He would then have never felt, much less would he have submitted to the humiliating, dishonest necessity of engaging in the interest and intrigues of his dependants, of supplying their vices, or relieving their beggary, at the expense of his country. He would not have betrayed such ignorance, or such contempt of the constitution, as openly to avow in a court of justice the purchase and sale of a borough. He would not have thought it consistent with his rank in the state, or even with his personal importance, to be the little tyrant of a little corporation. He would never have been insulted with virtues which he had labored to extinguish, nor suffered the disgrace of a mortifying defeat, which had made him ridiculous and contemptible, even to the few by whom he was not detested. I reverence the afflictions of a good man,—his sorrows are sacred. But how can we take part in the distresses of a man whom we can neither love nor esteem, or feel for a calamity of which he himself is insensible? Where was the father's heart, when he could look for or find an immediate consolation for the loss of an only son in consultations and bargains for a place at court, and even in the misery of balloting at the India House! —JUNIUS.

CHAUCER AND COWLEY.

In the first place, he is the father of English poetry, so I hold him in the same degree of veneration as the Grecians held Homer, or the Romans Virgil. He is a perpetual fountain of good sense, learned in all sciences, and therefore speaks properly on all subjects. As he knew what to say, so he knows also when to leave off; a continence which is practised by few writers, and scarcely by any of the ancients, excepting Virgil and Horace. One of our late great poets* is sunk in his reputation, because he could never forego any conceit which came in his way; but swept, like a drag-net, great and small. There was plenty enough, but the dishes were ill sorted; whole pyramids of sweetmeats for boys and women, but little of solid meat for men. All this proceeded not from any want of knowledge, but of judgment. Neither did he want that in discerning the beauties and faults of other poets, but only indulged himself in the luxury of writing; and perhaps knew it was a fault, but hoped the reader would not find it. For this reason, though he must always be thought a great poet, he is no longer esteemed a good writer; and for ten impressions which his works have had in so many successive years, yet at present a hundred books are scarcely purchased once a twelvemonth; for, as my last Lord Rochester said, though somewhat profanely, Not being of God, he could not stand.

Chaucer followed nature everywhere; but was never so bold as to go beyond her: and there is a great difference of being *poeta* and *nimis poeta*,—if we may believe Catullus, as much as betwixt a modest behavior and affectation. The verse of Chaucer, I confess, is not harmonious to us; but it is like the eloquence of one whom Tacitus commends—it was *auribus istius temporis accommodata*. They who lived with him and some time after him, thought it musical, and it continues so even in our judgment, if compared with the numbers of Lydgate and Gower, his contemporaries; there is the rude sweetness of a Scotch tune in it, which is natural and pleasing, though not perfect. It is true, I cannot go so far as he who published the last edition of him; for he would make us believe the fault is in our ears, and that there were really ten syllables in a verse, where we find but nine. But this opinion is not worth confuting; it is so gross and obvious an

* Cowley.

error, that common sense (which is a rule in everything but matters of faith and revelation) must convince the reader that equality of numbers in every verse which we call heroic, was either not known, or not always practised in Chaucer's age. It were an easy matter to produce some thousands of his verses which are lame for want of half a foot, and sometimes a whole one, and which no pronunciation can make otherwise. We can only say that he lived in the infancy of our poetry, and that nothing is brought to perfection at the first. We must be children before we grow men. There was an Ennius, and in process of time a Lucilius and a Lucretius, before Virgil and Horace. Even after Chaucer, there was a Spenser, a Harrington, a Fairfax, before Waller and Denham were in being; and our numbers were in their nonage till these last appeared. —DRYDEN.

DRYDEN AND POPE.

INTEGRITY of understanding and nicety of discernment were not allotted in a less proportion to Dryden than to Pope. The rectitude of Dryden's mind was sufficiently shown by the dismission of his poetical prejudices, and the rejection of unnatural thoughts and rugged numbers. But Dryden never desired to apply all the judgment that he had. He wrote, and professed to write, merely for the people; and when he pleased others he contented himself. He spent no time in struggles to rouse latent powers; he never attempted to make that better which was already good, nor often to mend what he must have known to be faulty. He wrote, as he tells us, with very little consideration; when occasion or necessity called upon him, he poured out what the present moment happened to supply, and when once it had passed the press, ejected it from his mind; for when he had no pecuniary interest he had no further solicitude.

Pope was not content to satisfy; he desired to excel, and therefore always endeavored to do his best: he did not court the candor, but dared the judgment of his reader, and expecting no indulgence from others, he showed none to himself. He examined lines and words with minute and punctilious observation, and retouched every part with indefatigable diligence till he had left nothing to be forgiven.

For this reason he kept his pieces very long in his hands, while he considered and reconsidered them. The only poems

which can be supposed to have been written with such regard to the times as might hasten their publication, were the two satires of "Thirty-eight;" of which Dodsley told me, that they were brought to him by the author that they might be fairly copied. "Almost every line," he said, "was then written twice over. I gave him a clean transcript, which he sent some time afterwards to me for the press, with almost every line written twice over a second time."

His declaration, that his care for his works ceased at their publication, was not strictly true. His parental attention never abandoned them; what he found amiss in the first edition, he silently corrected in those that followed. He appears to have revised the "Iliad," and freed it from some of its imperfections; and the "Essay on Criticism" received many improvements after its first appearance. It will seldom be found that he altered without adding clearness, elegance, or vigor. Pope had perhaps the judgment of Dryden; but Dryden certainly wanted the diligence of Pope.

In acquired knowledge, the superiority must be allowed to Dryden, whose education was more scholastic, and who, before he became an author, had been allowed more time for study, with better means of information. His mind has a larger range, and he collects his images and illustrations from a more extensive circumference of science. Dryden knew more of man in his general nature, and Pope in his local manners. The notions of Dryden were formed by comprehensive speculation; and those of Pope by minute attention. There is more dignity in the knowledge of Dryden, and more certainty in that of Pope.

Poetry was not the sole praise of either, for both excelled likewise in prose; but Pope did not borrow his prose from his predecessor. The style of Dryden is capricious and varied; that of Pope is cautious and uniform. Dryden observes the motions of his own mind; Pope constrains his mind to his own rules of composition. Dryden is sometimes vehement and rapid; Pope is always smooth, uniform, and gentle. Dryden's page is a natural field rising into inequalities, and diversified by the varied exuberance of abundant vegetation; Pope's is a velvet lawn, shaven by the scythe and levelled by the roller.

Of genius, that power which constitutes a poet—that quality without which judgment is cold, and knowledge is inert—that energy which collects, combines, amplifies, and animates—the superiority must, with some hesitation, be allowed to Dryden.

It is not to be inferred that of this poetical vigor Pope had only a little, because Dryden had more; for every other writer since Milton must give place to Pope; and even of Dryden it must be said, that if he has brighter paragraphs, he has not better poems. Dryden's performances were always hasty, either excited by some external occasion, or extorted by some domestic necessity; he composed without consideration, and published without correction. What his mind could supply at call, or gather in one excursion, was all that he sought, and all that he gave. The dilatory caution of Pope enabled him to condense his sentiments, to multiply his images, and to accumulate all that study might produce, or chance might supply. If the flights of Dryden therefore are higher, Pope continues longer on the wing. If of Dryden's fire the blaze is higher, of Pope's the heat is more regular and constant. Dryden often surpasses expectation, and Pope never falls below it. Dryden is read with frequent astonishment, and Pope with perpetual delight. —JOHNSON.

TRIUMPHS OF THE ENGLISH LANGUAGE.

Now gather all our Saxon bards, let harps and hearts be strung
To celebrate the triumphs of our own good Saxon tongue;
For stronger far than hosts that march with battle-flags unfurl'd,
It goes with FREEDOM, THOUGHT, and TRUTH, to rouse and rule the world.

Stout Albion learns its household lays on every surf-worn shore,
And Scotland hears its echoing far as Orkney's breakers roar—
From Jura's crags and Mona's hills it floats on every gale,
And warms with eloquence and song the homes of Innisfail.

On many a wide and swarming deck it scales the rough wave's crest,
Seeking its peerless heritage—the fresh and fruitful West:
It climbs New England's rocky steeps, as victor mounts a throne;
Niagara knows and greets the voice, still mightier than its own.

It spreads where winter piles deep snows on bleak Canadian plains,
And where, on Essequibo's banks, eternal summer reigns:
It glads Acadia's misty coasts, Jamaica's glowing isle,
And bides where gay with early flowers, green Texan prairies smile:
It tracks the loud, swift Oregon, through sunset valleys roll'd,
And soars where Californian brooks wash down their sands of gold.

It sounds in Borneo's camphor groves, on seas of fierce Malay,
In fields that curb old Ganges' flood, and towers of proud Bombay:
It wakes up Aden's flashing eyes, dusk brows, and swarthy limbs;
The dark Liberian soothes her child with English cradle hymns.

Tasmania's maids are wooed and won in gentle Saxon speech;
Australian boys read Crusoe's life by Sydney's shelter'd beach:
It dwells where Afric's southmost capes meet oceans broad and blue,
And Nieuveld's rugged mountains gird the wide and waste Karroo.

It kindles realms so far apart, that, while its praise you sing,
These may be clad with autumn's fruits, and *those* with flowers of spring:
It quickens lands whose meteor lights flame in an arctic sky,
And lands for which the Southern Cross hangs its orb'd fires on high.

It goes with all that prophets told, and righteous kings desired,—
With all that great apostles taught, and glorious Greeks admired;
With Shakespeare's deep and wondrous verse, and Milton's loftier mind,—
With Alfred's laws, and Newton's lore,—to cheer and bless mankind.

Mark, as it spreads, how deserts bloom, and error flies away,
As vanishes the mist of night before the star of day!
But grand as are the victories whose monuments we see,
These are but as the dawn, which speaks of noontide yet to be.

Take heed, then, heirs of Saxon fame, take heed, nor once disgrace
With deadly pen or spoiling sword, our noble tongue and race.
Go forth prepared in every clime to love and help each other,
And judge that they who counsel strife would bid you smite—a brother.

Go forth, and jointly speed the time, by good men pray'd for long,
When Christian states, grown just and wise, will scorn revenge and wrong;
When earth's oppress'd and savage tribes shall cease to pine or roam,
All taught to prize these English words—Faith, Freedom, Heaven, and Home.

—J. G. Lyons.

IMAGINATION.

If we were to be asked abruptly, and required to answer briefly, what qualities chiefly distinguish great artists from feeble artists, we would answer, I suppose, first their sensibility and tenderness; secondly, their imagination; and thirdly, their industry. Some of us might, perhaps, doubt the justice of attaching so much importance to this last character, because we have all known clever men who were indolent, and dull men who were industrious. But though you may have known clever men who were indolent, you never knew a great man who was so; and during such investigation as I have been able to give to the lives of the artists whose works are in all points noblest, no fact ever looms so large upon me—no law remains so steadfast in the universality of its application—as the fact and law that they are

all great workers; nothing concerning them is matter of more astonishment, than the quantity they have accomplished in the given length of their life; and when I hear a young man spoken of as giving promise of high genius, the first question I ask about him is always, Does he work?

But though this quality of industry is essential to an artist, it does not in anywise make an artist; many people are busy whose doings are little worth. Neither does sensibility make an artist; since, as I hope, many can feel both strongly and nobly, who yet care nothing about art. But the gifts which distinctively mark the artist—without which he must be feeble in life, forgotten in death,—*with* which he may become one of the shakers of the earth, and one of the signal-lights in heaven—are those of sympathy and imagination! I will not occupy your time, nor incur the risk of your dissent, by endeavoring to give any close definition of this last word. We all have a general and sufficient idea of imagination, and of its work with our hands and in our hearts: we understand it, I suppose, as the imagining or picturing of new things in our thoughts; and we always show an involuntary respect for this power, whenever we can recognize it, acknowledging it to be a greater power than manipulation, or calculation, or observation, or any other human faculty. If we see an old woman spinning at the fireside, and distributing her thread dexterously from the distaff, we respect her for her manipulation; if we ask her how much she expects to make in a year, and she answers quickly, we respect her for her calculation; if she is watching at the same time that none of her grandchildren fall into the fire, we respect her for her observation—yet for all this she may still be a commonplace old woman enough. But if she is all the time telling her grandchildren a fairy tale out of her head, we praise her for her imagination, and say she must be a rather remarkable old woman.

Precisely, in like manner, if an architect does his working-drawing well, we praise him for his manipulation; if he keeps closely within his contract, we praise him for his honest arithmetic; if he looks well to the laying of his beams, so that nobody shall drop through the floor, we praise him for his observation. But he must, somehow, tell us a fairy tale out of his head besides all this, else we cannot praise him for his imagination, nor speak of him as we did of the old woman, as being in anywise out of the common way, a rather remarkable architect.

—Ruskin.

PLEASURES OF IMAGINATION.

O BLEST of Heaven! whom not the languid songs
Of luxury, the siren! not the bribes
Of sordid wealth, nor all the gaudy spoils
Of pageant honor, can seduce to leave
Those ever-blooming sweets, which from the store
Of nature fair imagination culls
To charm the enliven'd soul! What though not all
Of mortal offspring can attain the heights
Of envied life; though only few possess
Patrician treasures or imperial state;
Yet nature's care, to all her children just,
With richer treasures and an ampler state,
Endows at large whatever happy man
Will deign to use them. His the city's pomp,
The rural honors his. Whate'er adorns
The princely dome, the column and the arch,
The breathing marbles and the sculptured gold,
Beyond the proud possessor's narrow claim,
His tuneful breast enjoys. For him the spring
Distils her dews, and from the silken gem
Its lucid leaves unfolds; for him the hand
Of autumn tinges every fertile branch
With blooming gold and blushes like the morn;
Each passing hour sheds tribute from her wings;
And still new beauties meet his lonely walk,
And loves unfelt attract him. Not a breeze
Flies o'er the meadow, not a cloud imbibes
The setting sun's effulgence, not a strain
From all the tenants of the warbling shade
Ascends, but whence his bosom can partake
Fresh pleasure unreproved. Nor thence partakes
Fresh pleasure only; for the attentive mind,
By this harmonious action on her powers,
Becomes herself harmonious: wont so oft
In outward things to meditate the charm
Of sacred order, soon she seeks at home
To find a kindred order, to exert
Within herself this elegance of love,
This fair inspired delight; her temper'd powers
Refine at length, and every passion wears
A chaster, milder, more attractive mien;
But if to ampler prospects, if to gaze
On nature's form, where, negligent of all
These lesser graces, she assumes the port
Of that eternal majesty that weigh'd

The world's foundations—if to these the mind
Exalts her daring eye, then mightier far
Will be the change, and nobler. Would the forms
Of servile custom cramp her generous power;
Would sordid policies, the barbarous growth
Of ignorance and rapine, bow her down
To tame pursuits, to indolence and fear?
Lo! she appeals to nature, to the winds
And rolling waves, the sun's unwearied course,
The elements and seasons: all declare
For what the eternal Maker has ordain'd
The powers of man; we feel within ourselves
His energy divine: He tells the heart,
He meant, He made us to behold and love
What He beholds and loves—the general orb
Of life and being; to be great like Him,
Beneficent and active. Thus the men
Whom nature's works can charm, with God himself
Hold converse; grow familiar day by day,
With His conceptions, act upon His plan
And form to His the relish of their souls.

—AKENSIDE.

ATHENIAN ARCHITECTURE DURING THE AGE OF PERICLES.

THEN rapidly progressed those glorious fabrics which seemed, as Plutarch gracefully expresses it, endowed with the bloom of a perennial youth. Still the houses of private citizens remained simple and unadorned, still the streets were narrow and irregular; and even centuries after, a stranger entering Athens would not at first have recognized the claims of the mistress of Grecian art. But to the homeliness of her common thoroughfares and private mansions the magnificence of her public edifices now made a dazzling contrast. The Acropolis, that towered above the homes and thoroughfares of men—a spot too sacred for human habitation—became, to use the proverbial phrase, "a city of gods." The citizen was everywhere to be reminded of the majesty of the STATE—his patriotism was to be increased by the pride in her beauty—his taste to be elevated by the spectacle of her splendor.

Then flocked to Athens all who throughout Greece were eminent in art. Sculptors and architects vied with each other in adorning the young empress of the seas; then rose the masterpieces of Phidias, of Callicrates, of Mnesicles, which, either in

THE ACROPOLIS, ATHENS.

their broken remains, or in the feeble copies of imitators less inspired, still command so intense a wonder, and furnish models so immortal. And if, so to speak, their bones and relics excite our awe and envy, as testifying of a lovelier and grander race which the deluge of time has swept away, what, in that day, must have been their brilliant effect—unmutilated in their fair proportions —fresh in all their lineaments and hues? For their beauty was not limited to the symmetry of arch and column, nor their materials confined to the marbles of Pentelicus and Paros. Even the exterior of the temples glowed with the richest harmony of colors, and was decorated with the purest gold; an atmosphere peculiarly favorable both to the display and preservation of art, permitted to external pediments and friezes all the minuteness of ornament, all the brilliancy of colors, such as in the interior of Italian churches may yet be seen; vitiated, in the last, by a gaudy and barbarous taste.

Nor did the Athenians spare any cost upon the works that were, like the tombs and tripods of their heroes, to be the monuments of a nation to distant ages, and to transmit the most irrefragable proof "that the power of ancient Greece was not an idle legend." The whole democracy were animated with the passion

of Pericles; and when Phidias recommended marble as a cheaper material than ivory for the great statue of Minerva, it was for that reason that ivory was preferred by the unanimous voice of the assembly. Thus, whether it were extravagance or magnificence, the blame in one case, the admiration in another, rest not more with the minister than the populace. It was, indeed, the great characteristic of those works that they were entirely the creation of the people; without the people Pericles could not have built a temple or engaged a sculptor. The miracles of that day resulted from the enthusiasm of a population yet young—full of the first ardor for the beautiful—dedicating to the state, as to a mistress, the trophies honorably won, or the treasures injuriously extorted—and uniting the resources of a nation with the energy of an individual, because the toil, the cost, were borne by those who succeeded to the enjoyment and arrogated the glory.

—BULWER.

GOTHIC ARCHITECTURE.

THE progress of architecture in religious structures, under the influence of Christianity, has been traced with much ingenuity and research from the *basilicæ*, or courts of justice of ancient Rome, (converted in the days of Constantine into churches,) through its various changes during the Lombard ascendancy, till it merged, by some unknown steps, in what has acquired the name of the Gothic or pointed style. This consummation took place about the end of the eleventh or beginning of the twelfth century. Hitherto the arch had been almost uniformly semicircular, as being the form of greatest durability; but at this period a new principle was introduced, which, with a view to loftiness, combined with extensive space and lightness, elongated the arch by means of two segments of a large circle meeting in a central point. What was thus lost in equality of pressure was compensated for by various resources of the art, and, among others, by what were denominated flying buttresses, which afforded countervailing inward pressure, while they were consistent with the general design of bestowing a character of majesty on the whole fabric, by reducing it to somewhat of a pyramidal form.

The power of the arch was now called forth in its utmost perfection, and the various combinations which its new form required, constituted the triumph of architectural skill. What served to modify these combinations was, that the cross, the

AISLE IN MELROSE ABBEY.

instrument of man's redemption, which had been early adopted as the chief emblem of the Christian faith, and the very form of which, in an ignorant and superstitious age, was supposed to be a charm against evil, and a token for good, was employed in the sacred architecture of the age, not merely to ornament the exterior of their buildings, and give sacredness to the altar, but even to regulate the principle on which their ecclesiastical structures were erected. This distinctive form inferred a space where the transverse limbs of the cross should unite in a large quadrangle, and this quadrangle gave rise to lofty arches springing from

massy pillars, which were abutted in the various directions of the lateral pressure, by the solid walls that enclosed the area of the cruciform building. On this arched transept stood the high tower, which gave characteristic dignity to the whole.

The history of this remarkable form of structure, its sudden rise, its universal adoption, and, after a few centuries, its equally sudden decline, forms a striking feature in the progress of the art. It may be accounted for, chiefly, from the intercommunity which existed over the whole bounds of the Latin Church among ecclesiastics, and the facility with which they imparted to each other the ideas which prevailed in influential quarters. The Gothic style—first adopted, as would appear, in the vast empire of Germany, where the arts were, at that period, most successfully cultivated—was recommended by various considerations which could not fail to weigh on the minds of the great corporation which then swayed public opinion. It was admirably adapted to the prevailing form of worship, its vast assemblies, its solemn processions, its splendid and imposing ceremonies. It awed by the magnificence of its conception, and the power and science required in its execution. It formed an enduring memorial both of the skill and the resources of those under whose auspices it flourished. Besides all this, it was consistent with the principle which the Church of Rome affected, that all the nations under its dominion should display a uniformity, not merely in their ritual, but in the very character and taste of their edifices. This passion for uniformity was increased by the intercourse established by means of the crusades; and, doubtless, some of the grand conceptions which the view of conquered Constantinople and the once mighty cities of Palestine inspired were embodied in this new and favorite architecture.

From Germany the taste for Gothic architecture quickly spread into France and Italy; and, by means of the powerful fraternity of Freemasons, who, if not the originators of this style, enthusiastically adopted it, was soon diffused over the whole boundaries of the Latin Church. This remarkable corporation, which was invested by the Popes with very important exclusive privileges, spread themselves throughout Europe, carrying with them at once the science and the authority that enabled them, in those dark ages, to form works of so much magnificence; and being aided, wherever they went, both by the countenance of the clergy and by the wealth which a mistaken piety placed at their

disposal, they supplied the demand which the zeal of the times had excited.

It is remarkable, that of the original designs for these mighty monuments of art very few traces have been left, probably because the jealousy of the Freemasons concealed them from the public eye. Some, however, have been recently discovered among the archives of German monasteries, which show the deep science, the long forethought, and the complicated calculation employed in their formation. —HENRY DUNCAN.

FLYING BUTTRESS AT AMIENS.

ANCIENT AMERICAN ARCHITECTURE.

OUR readers may not be aware that the antiquities of the Indian tribes of North America have acquired, within the last half century, an immense and increasing interest. The earlier historians of the continent were ignorant or incredulous as to the existence of any such mementos of the past, although the chroniclers who

IDOLS AT ZAPATERO.

followed in the wake of Cortez and other conquerors had described them in the most glowing terms. At length, by the researches of Humboldt and other travellers in Mexico and Peru, especially of Stephens and Catherwood in Central America, it has been found that those portions of the continent abound in the most magnificent remains. Immense pyramidal mounds, crowned with gorgeous palaces, or sacrificial altars, adorned with elaborate sculptures, tablets covered with hieroglyphic inscriptions, as yet undecipherable, generally rude, but sometimes elegant in idea and execution, sculptures, and paintings, and ornaments, are met with in increasing numbers among the depths of the tropical forests, the gorgeous vegetation of which invests them, as it were, with a funeral shroud, and embraces them in the death-grasp of final obliteration. It is fortunate that some records of these precious memorials are preserved to us by recent explorers. They attest the former existence of a race which had attained a fixed state of civilization, a considerable

knowledge of the arts and sciences, with a religious system, of which terror appears to have been the great principle, human sacrifices forming its conspicuous feature; a state of things, indeed, in all respects identical with the condition of Mexico at the period of its invasion by Cortez, when some of the temples were doubtless destroyed, while others, of more ancient date, probably, were at that period already fallen into ruin. In North America, during the period of its first settlement, which was confined almost exclusively to the seaboard, no discoveries whatever were made; but as the stream of immigration, crossing the ridges of the Alleghanies, poured down upon the Mississippi and the Ohio, and the dense forests and boundless prairies of the west were gradually opened and explored, another and very interesting class of antiquities began to be disinterred from the oblivion of centuries. It was slowly, indeed, as the forest fell beneath the axe of the backwoodsman, that they came to light; they were for a long time but partially uncovered, or so imperfectly explored, that, even until a very recent period, they were regarded by many as being only peculiarities of geological formation, which credulous imagination had converted into fortresses, and temples, and sepulchres. The recent researches of Squier and Davis, accompanied as they are by elaborate surveys and drawings, have left no further room for scepticism, and have established, beyond dispute, the interesting fact, that the interior of the North American continent, as well as the southern, was once inhabited by an immense and settled population, who have left behind them almost innumerable memorials of their occupation.

These remains extend almost continuously over the whole interior from the great lakes on the north to the Gulf of Mexico on the south, and from the sources of the Alleghany in western New York for above a thousand miles up the Missouri, and into Michigan, Wisconsin, and Iowa. They are found in far greater numbers in the western than in the eastern portion of this immense district. They may be traced, too, along the seaboard from Texas to Florida, but are not met with any further along the north-eastern coast. They are generally planted in the rich valleys of the western rivers, or elevated above them on commanding natural terraces. In the neighborhood of the upper lakes they assume the singular form of gigantic relievos of earthen walls, often covering several acres, tracing out upon the soil outlines of the figures of men, birds, beasts, and reptiles. Southward of these appear, on the banks of the Ohio and its tributaries,

mounds and truncated terraces of immense extent, sustaining earthen enclosures and embankments extending for entire miles. Of these extraordinary earthworks many were evidently fortifications, exhibiting no small constructive skill, defended by numerous bastions, having covered ways, horn-works, concentric walls, and lofty mounds intended as observatories, and numerous gateways giving access to the immense line of fortified enclosure, with graded roadways to ascend from terrace to terrace. Of these defences there appears to have been a chain, extending from the head of the Alleghany diagonally across Central Ohio to the River Wabash.

Not all, however, of these earthworks were intended as fortresses; many were evidently designed for religious purposes. One of the most extraordinary of these is called the Great Serpent, on a projecting tongue of high land in Adam's county, Ohio. The head of the reptile points towards the extremity, its form is traced out with all its convolutions, and its jaws are opened as if it were to swallow a large egg-shaped enclosure occupying the extreme point of the promontory. Its entire length, if stretched out, would be a thousand feet. The serpent and globe was a symbol in Egypt, Greece, Assyria, and Mexico; and those familiar with English antiquities will no doubt remember a similar and still more gigantic instance of a serpent, sacred enclosure, and mound on the downs of Avebury in Wiltshire. Of the earthworks some are square, some perfectly circular, others of intricate and curious outline, while many appear to have something symbolical in their arrangements. It is necessary also to correct a popular mistake with regard to their materials, which, it has been affirmed, consist exclusively of earth, whereas both stone and unbaked brick have occasionally been made use of. The mounds scattered over the western valleys and prairies are almost innumerable, and of infinitely various dimensions, one of the largest covering six acres of ground. These also appear to have been appropriated to different purposes, some to sustain sacrificial altars or temples, others intended for sepulchres, containing skeletons, with pottery, and charcoal for consuming the bodies. A remarkable instance of the latter class is the great mound at Grave Creek, which was penetrated by a perpendicular shaft opening into two sepulchral chambers, containing several skeletons with pottery and other articles. Within these enclosures and mounds have been discovered numerous stone sculptures of the heads of men, or of human figures in crouching

attitudes; of the beaver, the wild cat, and the toad; of the swallow and other birds; of the heron striking a fish, the last very beautifully executed; and of the sea cow, an animal peculiar to the tropical regions. Ornamented tablets have also been dug up, and in some places sculptures of men, eagles, and elks can be traced on the face of the rocks, with rude attempts to represent hunting scenes. There have also been found instruments of silver and copper, axes, drills, and spear heads, stone discs, and instruments for games, with beads, shells, ornaments, and pipes, as well as decorated pottery.

Respecting the whole of these monuments it may be remarked, that they are evidently far ruder than those in Mexico and Central America, to which as they approach in locality they appear to approximate in character and arrangements; and it is thus an interesting question whether we are to regard them as the original and more ancient works of a race who afterwards reached a higher degree of civilization further to the south, or whether, on the contrary, they present to us traces of a migration from the south towards the north. "It is not impossible," observes Squier, "that the agriculture and civilization of Mexico, Central America, and Peru, may have originated on the banks of the Mississippi." Whatever may be the result of further researches, one thing is abundantly evident, that the great valley of that river, and of its tributaries, was once occupied by a population who had advanced from the migratory state of hunting to the fixed condition of cultivators of the soil; that the population who raised these great defensive and sacred structures must have been dense and widely spread, in order to execute works for which prolonged and combined efforts were so obviously necessary, and that their customs, laws, and religion must have assumed a fixed and definite shape. —*Sharpe's Magazine.*

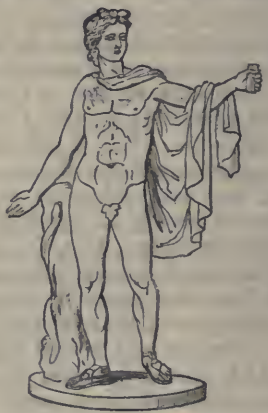
CELEBRATED SCULPTURES.

The art of sculpture has been practised from the earliest ages. Probably its practice was anterior to that of drawing, and its early history is almost a part of the history of the religions of the ancients. In its large sense sculpture may be taken to signify the representation of form in any material; wood, metal, stone, clay, plaster, have all been used. Some of the ancient metal figures were cast, so as to give color to the figures. Thus silver

has been used to represent the pallid hue of death, and a mixture of bronze and iron to indicate the glow of the skin. There was a statue of Augustus formed of amber; and the figures used in funereal ceremonies were sometimes composed of odoriferous gums and spices. We shall, however, only thus indicate these conceits of art, and confine ourselves to describing a few of those statues which may be taken as examples of the highest perfection which has yet been attained.

The finest example of manly grace which sculptors have bequeathed to us is to be found in the wonderfully beautiful and graceful statue of the APOLLO BELVIDERE.

This splendid specimen of ancient art was found towards the



APOLLO BELVIDERE.

end of the fifteenth century in the ruins of the ancient Antium, at the Capo d'Anzo, about fifteen leagues from Rome. It was purchased by Pope Julius II., and by him placed in the Belvidere in the Vatican. The figure is about seven feet high, and, with the exception of a loose cloak, perfectly naked. When found, the left hand and right arm had been broken off, and those parts were restored by Giovanni Angelo da Montorsoli, a pupil of Michael Angelo. In its present state it represents the god after he has just discharged an arrow at the serpent Python, waiting to watch the effect of his shaft.

For some time the Apollo was supposed to be a Grecian pro-

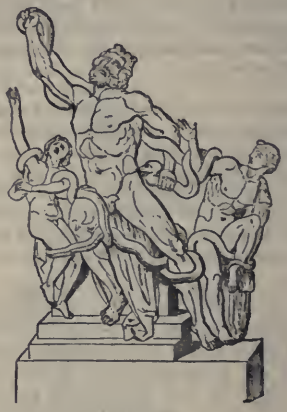
duction, and specifically attributed to Phidias. There is, however, no proof of this, and the evidence seems to lean to its being created in the time of Nero. It is not the least wonderful fact in the history of art that that monster who spared none—whose lusts, passions, and appetites were his sole guide—was an enthusiastic admirer of the beauties of art. The following passage of Homer's Hymn is supposed to be that which suggested the idea to the sculptor :—

> "Apollo's bow unerring sped the dart,
> And the fierce monster groan'd beneath the smart;
> Tortured with pain, hard breathing on the ground,
> The serpent writhed beneath the fatal wound.
> Now here, now there, he winds amidst the wood,
> And vomits forth his life in streams of blood.
> 'Rot where thou liest,' the exulting archer said,
> 'No more shall man thy vengeful fury dread;
> But every hand that tills earth's spacious field
> Her grateful offerings to my shrine shall yield;
> Not Typha's strength, nor fell Chimæra's breath,
> Can now protect thee from the grasp of death;
> There on the damp black earth, in foul decay,
> Rot, rot to dust, beneath the sun's bright ray.'"

Parallel with the Apollo, as the perfect representation of female elegance, is the Venus de Medici, which is undoubtedly a relic of ancient Greek art. It is variously stated to have been found at the villa of Hadrian, near Tivoli, and the forum of Octavia at Rome; and on the plinth was the name of the artist, "Cleomenes, the son of Apollodorus of Athens," who is known to have lived about two hundred years before the Christian era. At the time of its discovery it was deficient of the right and the lower part of the left arm, which has been restored; and the plinth was so damaged that it was replaced by a copy. In the sixteenth century it stood in the Medici Gardens at Rome; about 1680 it was carried to Florence. When the victorious French plundered Italy of the best of her works of art it was taken to Paris, but was restored to the Imperial Gallery in Florence (called the Tribune) after the success of the allied arms. The figure is of Parian marble, four feet nine inches in height, and exquisitely proportioned. Its rounded limbs show the greatest beauty of the female form, and have furnished models for the sculptors of after ages. The face, however, although beautiful, is deficient in charm of expression; and an attempt at lightness and elegance has reduced the head to a size

so small as to be only compatible with idiocy. Still there is a graceful repose, and a life-like aspect about the whole to which the chiselled marble very seldom reaches, justifying the opinion that this is one of the finest statues of all time.

Sculpture is more adapted to the representation of quiescent or gently moving forms, than those in energetic action, but the group of the LAOCOON shows it realizing the struggles of despair.



THE LAOCOON.

This group was found on the old Esquiline Hill, at Rome, behind the baths of Titus. Pliny, who speaks of it as the finest of all works of art, asserts that it was the joint effort of three sculptors of Rhodes—Ajesander, Polydorus, and Athenodorus—who were employed by the Emperor Titus. The subject is the destruction of Laocoon, the priest of Neptune, and his two sons, by two immense sea-serpents, for disobeying Minerva. Virgil thus describes the incident :—

> "Laocoon, Neptune's priest, by lot that year,
> With solemn pomp then sacrificed a steer;
> When, dreadful to behold, from sea we spied
> Two serpents, rank'd abreast, the seas divide,
> And smoothly sweep along the swelling tide.
> Their flaming crests above the waves they show,
> Their bellies seem to burn the seas below;

Their speckled tails advance to steer their course,
And on the sounding shore the flying billows force.
And now the strand, and now the plain they held,
Their ardent eyes with bloody streaks were fill'd,
Their nimble tongues they brandish'd as they came,
And lick'd their hissing jaws that sputter'd flame.
We fled amazed; their destined way they take,
And to Laocoon and his children make;
And first around the tender boys they wind,
Then with their sharpen'd fangs their limbs and bodies grind.
The wretched father coming to their aid
With pious haste, but vain, they next invade;
Twice round his waist their winding volumes roll'd,
And twice about his gasping throat they fold;
The priest, thus double choked, their crests divide,
And towering o'er his head in triumph ride."

The group differs in some respects from the text of Virgil. In the centre is the father, whose form, as he struggles despairingly, is the embodiment of manly beauty and strength. The serpent, grasped by the neck, is just fastening on his side. The son on his right, encircled by the folds, has already felt the fangs of the other snake, and as his tender frame yields to the pressure, and the swift poison courses through his veins, casts up a look of helpless agony to his father. The other boy, on the left, has not yet felt the sting, but raising his hand and head amid the serpent folds, appears to utter an affrighted cry for help. The expression of the entire group is at once terrific and admirable. The spectators see at once that the struggles are those of hopeless despair, and the faces tell a tale of almost more than mortal terror.

Two undoubted remains of Grecian genius, which formerly adorned the magnificent Parthenon at Athens, are the THESEUS and the ILISSUS, now in the Elgin Marble Room of the British Museum. The figure of Theseus, the Athenian hero, is that of a colossal giant reposing on a rock covered by a lion's skin. It is extraordinary for the breadth and power which it exhibits; and though mutilated by the loss of both feet and hands, and part of the nose, conveys the character of the demi-god of old. There is the compact head, the fierce grin, the massive brow, and the decided features ascribed to the old athletæ; and the vast trunk, ponderous limbs, and swelling muscles are life-like in their apparent power. There are all the marks of that courage and vigor which made men great, when the broadest laws were written on the edge of the sword.

The Ilissus, supposed to represent a river-god, is a figure of another mould. It is still more mutilated than the Theseus, having lost its head in addition to its hands and feet. Its prevailing characteristic is elegance rather than strength. As it stretches its length along, the contour of its limbs, and the folds of the drapery which fall from it as the body is raised upon one hand, seem to imitate the flow of waves, so softly and gently does one line blend into another. In modern art, perhaps, the Hercules and Lichas of Canova are the only statues which can compare, for vitality and beauty, with these fragments of the achievements of ancient Greece.

The DYING GLADIATOR is a memorial of that time when savage

barbarism mingled with luxurious civilization. In Rome, the mistress of the whole world—Rome, with her vast works of art, her invincible legions, and her patriotic people—rose that immense temple of Moloch, the Amphitheatre. There grave men, whose words are yet appealed to as the standards of wisdom; orators and poets, whose bursts of eloquence still are quoted to admiring senates; and tender women, the best mothers and daughters of the city, came to a banquet of blood, as to a spectacle. There, on the blood-stained arena, they saw wild beasts tear each other in furious combat; and there they looked on, with unpitying face and unwavering eye, while slaves made in war were forced to fight to the death, for the amusement of their unrelenting conquerors. There has been such a scene, and this statue tells the tale. The fight is over, and while the conqueror is cheered, there lies the victim, thrown down upon his shield, his weakening hand scarce keeping his head from falling prone on the earth. The tide of life is ebbing from that ghastly wound

upon the breast; and on the face, blending with the pain, the faintness, the shame of defeat, we can trace the memories of the past, crowding themselves into the last moments of existence. But nothing we can say will so well realize the conception as the beautiful lines of one of the greatest poets:—

"I see before me the gladiator lie;
He leans upon his hand—his manly brow
Consents to death, but conquers agony!
And his droop'd head sinks gradually low—
And through his side the last drops, ebbing slow
From the red gash, fall heavy, one by one,
Like the first of a thunder-shower; and now
The arena swims around him,—he is gone
Ere ceased the inhuman shout which hail'd the wretch who won.

"He heard it, but he heeded not,—his eyes
Were with his heart, and that was far away;
He reck'd not of the life he lost, nor prize,
But where his rude hut by the Danube lay.
There were his young barbarians at play,
There was their Dacian mother,—he their sire
Butcher'd to make a Roman holiday,—
All this rush'd with his blood,—shall he expire,
And unavenged? Arise! ye Goths, and glut your ire!"

Verily that old Rome, great and generous as she was, fell under a just retribution, when the barbarians she so oppressed arose, and, breaking the chain with which she bound the world, scattered her power to the winds, leaving to other ages her greatness as an example, and her fate as a warning.

—*Wonders of all Nations.*

ON CHANTREY'S SLEEPING CHILDREN.

Look at those sleeping children—softly tread,
Lest thou do mar their dream, and come not nigh,
Till their fond mother, with a kiss, shall cry,
"'Tis morn, awake! awake!" Ah, they are dead!
Yet folded in each other's arms they lie
So still—oh, look!—so still and smilingly,
So breathing and so beautiful, they seem
As if to die in youth were but a dream
Of spring and flowers! Of flowers? Yet nearer stand:
There is a lily in one little hand,
Broken, but not faded yet,
As if its cup with tears was wet.
So sleeps that child, not faded, though in death,
And seeming still to hear her sister's breath,

As when she first did lay her head to rest
Gently on that sister's breast,
And kiss'd her ere she fell asleep!
The archangel's trump alone shall wake that slumber deep.
Take up those flowers that fell
From the dead hand, and sigh a long farewell!
Your spirits rest in bliss!
Yet ere with parting prayers we say
"Farewell for ever" to the insensate clay,
Poor maid, those pale lips we will kiss!
Ah! 'tis cold marble! Artist who hast wrought
This work of nature, feeling, and of thought,
Thine, Chantrey, be the fame
That joins to immortality thy name.
For these sweet children, that so sculptured rest,
A sister's head upon a sister's breast,
Age after age shall pass away,
Nor shall their beauty fade, their fame decay.
For here is no corruption, the cold worm
Can never prey upon that beauteous form;
This smile of death that fades not shall engage
The deep affections of each distant age.
Mothers, till ruin the round world hath rent,
Shall gaze with tears upon the monument;
And fathers sigh, with half-suspended breath,
"How sweetly sleep the innocent in death!" —Bowles.

GREEK PAINTERS.

The art of painting was developed later than that of sculpture, of which it seems to have been the offspring, and in its earlier period to have partaken very closely of the statuesque character. The ancient Greek paintings were either in water colors or in wax; oil colors appear to have been unknown. The first Grecian painter of any great renown was Polygnotus, who was contemporary with Phidias, though probably somewhat older. He was a native of Thasos, whence he was, in all probability, brought by his friend and patron Cimon, when he subjugated that island in B.C. 426. At that period he must at least have been old enough to have earned the celebrity which entitled him to Cimon's patronage. He subsequently became naturalized at Athens, where he probably died about the year 423 B.C. His chief works in Athens were executed in adorning those buildings which were erected in the time of Cimon; as the temple of Theseus, and the

Poecile Stoa, or Painted Colonnade. His paintings were essentially *statuesque*,—the representation, by means of colors on a flat surface, of figures similar to those of the sculptor. But the improvements which he introduced on the works of his predecessors were very marked and striking, and form an epoch in the art. He first depicted the open mouth, so as to show the teeth, and varied the expression of the countenance from its ancient stiffness. He excelled in representing female beauty and complexion, and introduced graceful flowing draperies, in place of the hard stiff lines by which they had been previously depicted. He excelled in accuracy of drawing, and in the nobleness, grace, and beauty of his figures, which were not mere transcripts from nature, but had an ideal and elevated character. His masterpieces were executed in the Lesché (enclosed court or hall for conversation) of the Cnidians at Delphi, the subjects of which were taken from the cycle of epic poetry. In these there seems to have been no attempt at perspective, and names were affixed to the different figures.

Painting reached a further stage of excellence in the hands of Apollodorus, Zeuxis, and Parrhasius, the only other artists whom we need notice during this period. Apollodorus was a native of Athens, and first directed attention to the effect of light and shade in painting, thus creating another epoch in the art. His immediate successors, or rather contemporaries, Zeuxis and Parrhasius, brought the art to a still greater degree of perfection. Neither the place nor the date of the birth of Zeuxis can be accurately ascertained, though he was probably born about 455 B.C., since thirty years after that date we find him practising his art with great success at Athens. He was patronized by Archelaus, king of Macedonia, and spent some time at his court. He must also have visited Italy, as he painted his celebrated picture of Helen for the city of Croton. He acquired great wealth by his pencil, and was very ostentatious in showing it. He appeared at Olympia in a magnificent robe, having his name embroidered in letters of gold; and the same vanity is also displayed in the anecdote that after he had reached the summit of his fame, he no longer sold, but gave away his pictures, as being above all price. With regard to his style of art, single figures were his favorite subjects. He could depict gods or heroes with sufficient majesty; but he particularly excelled in painting the softer graces of female beauty. In one important respect he appears to have degenerated from the style of Polygnotus, his idealism being rather that

of *form* than of *character* and *expression*. Thus his style is analogous to that of Euripides in tragedy. He was a great master of color, and his paintings were sometimes so accurate and life-like as to amount to illusion. This is exemplified in the story told of him and Parrhasius. As a trial of skill these artists painted two pictures. That of Zeuxis represented a bunch of grapes, and was so naturally executed that the birds came and pecked at it. After this proof, Zeuxis, confident of success, called upon his rival to draw aside the curtain which concealed his picture. But the painting of Parrhasius was the curtain itself, and Zeuxis was now obliged to acknowledge himself vanquished, for though he had deceived the birds, Parrhasius had deceived the author of the deception. Whatever may be the historical value of this tale, it at least shows the high reputation which both artists had acquired for the natural representation of objects. But many of the pictures of Zeuxis also displayed great dramatic power. He worked very slowly and carefully, and he is said to have replied to somebody who blamed him for his slowness, "It is true I take a long time to paint, but then I paint works to last a long time." His masterpiece was the picture of Helen, already mentioned.

Parrhasius was a native of Ephesus, but his art was chiefly exercised at Athens, where he was presented with the right of citizenship. His date cannot be accurately ascertained, but he was probably rather younger than his contemporary, Zeuxis, and it is certain that he enjoyed a high reputation before the death of Socrates. The style and degree of excellence attained by Parrhasius appear to have been much the same as those of Zeuxis. He was particularly celebrated for the accuracy of his drawing, and the excellent proportions of his figures. For these he established a canon, as Phidias had done in sculpture for gods, and Polycletus for the human figure, whence Quintilian calls him the legislator of his art. His vanity seems to have been as remarkable as that of Zeuxis. Among the most celebrated of his works was a portrait of the personified Athenian *Demos*, which is said to have miraculously expressed even the most contradictory qualities of that many-headed personage.

The excellence attained during this period by the great masters in the higher walks of sculpture and painting was, as may be well supposed, not without its influence on the lower grades of art. This is particularly visible in the ancient painted vases, which have been preserved to us in such numbers, the paintings on

which, though of course the productions of an inferior class of artists, show a marked improvement, both in design and execution, after the time of Polygnotus.

—SMITH'S *Dictionary of Antiquities.*

PARRHASIUS.

THERE stood an unsold captive in the mart,
A gray-hair'd and majestical old man,
Chain'd to a pillar. It was almost night,
And the last seller from his place had gone,
And not a sound was heard but of a dog
Crunching beneath the stall a refuse bone,
Or the dull echo from the pavement rung,
As the faint captive changed his weary feet.
He had stood there since morning, and had borne
From every eye in Athens the cold gaze
Of curious scorn. The Jew had taunted him
For an Olynthian slave. The buyer came
And roughly struck his palm upon his breast,
And touch'd his unheal'd wounds, and with a sneer
Pass'd on; and when, with weariness o'erspent,
He bow'd his head in a forgetful sleep,
The inhuman soldier smote him, and, with threats
Of torture to his children, summon'd back
The ebbing blood into his pallid face.

'Twas evening, and the half-descended sun
Tipp'd with a golden fire the many domes
Of Athens, and a yellow atmosphere
Lay rich and dusky in the shaded street
Through which the captive gazed. He had borne up
With a stout heart that long and weary day,
Haughtily patient of his many wrongs;
But now he was alone, and from his nerves
The needless strength departed, and he lean'd
Prone on his massy chain, and let his thoughts
Throng on him as they would. Unmark'd of him,
Parrhasius at the nearest pillar stood,
Gazing upon his grief. The Athenian's cheek
Flush'd as he measured, with a painter's eye,
The moving picture. The abandon'd limbs,
Stain'd with the oozing blood, were laced with veins
Swollen to purple fulness; the gray hair,
Thin and disorder'd, hung about his eyes;
And as a thought of wilder bitterness

Rose in his memory, his lips grew white,
And the fast workings of his bloodless face
Told what a tooth of fire was at his heart.

. . . . . .

The golden light into the painter's room
Stream'd richly, and the hidden colors stole
From the dark pictures radiantly forth,
And in the soft and dewy atmosphere
Like forms and landscapes magical they lay.
The walls were hung with armor, and about
In the dim corners stood the sculptured forms
Of Cytheris and Dian, and stern Jove,
And from the casement soberly away
Fell the grotesque, long shadows, full and true,
And, like a veil of filmy mellowness,
The lint-specks floated in the twilight air.
Parrhasius stood, gazing forgetfully
Upon his canvas. There Prometheus lay,
Chain'd to the cold rocks of Mount Caucasus—
The vulture at his vitals, and the links
Of the lame Lemnian festering in his flesh ;
And as the painter's mind felt through the dim,
Rapt mystery, and pluck'd the shadows forth
With its far-reaching fancy, and with form
And color clad them, his fine, earnest eye
Flash'd with a passionate fire, and the quick curl
Of his thin nostril and his quivering lip
Were like the wingèd gods, breathing from his flight.

" Bring me the captive now !
My hand feels skilful, and the shadows lift
From my waked spirit airily and swift,
And I could paint the bow
Upon the bended heavens—around me play
Colors of such divinity to-day.

" Ha ! bind him on his back !
Look ! as Prometheus in my picture here !
Quick, or he faints !—stand with the cordial near
Now—bend him to the rack !
Press down the poison'd links into his flesh !
And tear agape that healing wound afresh !

" So—let him writhe ! How long
Will he live thus ? Quick, my good pencil, now !
What a fine agony works upon his brow !
Ha ! gray-hair'd, and so strong !
How fearfully he stifles that short moan !
Gods ! if I could but paint a dying groan !

"Pity thee? So I do!
I pity the dumb victim at the altar—
But does the robed priest for his *pity* falter?
I'd rack thee though I knew
A thousand lives were perishing in thine:
What were ten thousand to a fame like mine?

"Hereafter? Ay—hereafter!
A whip to keep a coward to his track!
What gave Death ever from his kingdom back
To check the sceptic's laughter?
Come from the grave to-morrow with that story,
And I may take some softer path to glory.

"No, no, old man! we die
Even as the flowers, and we shall breathe away
Our life upon the chance wind even as they!
Strain well thy fainting eye,
For when that bloodshot quivering is o'er,
The light of heaven will never reach thee more.

"Yet, there's a deathless name!
A spirit that the smothering vault shall spurn,
And like a steadfast planet mount and burn.
And though its crown of flame
Consumed my brain to ashes as it shone,
By all the fiery stars I'd bind it on!

"Ay, though it bid me rifle
My heart's last fount for its insatiate thirst,
Though every life-strung nerve be madden'd first;
Though it should bid me stifle
The yearning in my throat for my sweet child,
And taunt its mother till my brain went wild.

"All—I would do it all—
Sooner than die, like a dull worm to rot,
Thrust foully into earth to be forgot.
Oh, heavens!—but I appall
Your heart, old man! forgive—ha! on your lives
Let him not faint!—rack him till he revives!

"Vain, vain, give o'er! his eye
Glazes apace. He does not feel you now.
Stand back! I'll paint the death-dew on his brow!
Gods! if he do not die
But for *one* moment—one—till I eclipse
Conception with the scorn of those calm lips!

"Shivering! Hark! he mutters
Brokenly now,—that was a difficult breath.
Another! Wilt thou never come, O Death?
Look! how his temple flutters!
Is his heart still? Aha! lift up his head!
He shudders—gasps—Jove, help him!—so—he's dead."

. . . . . .

How like a mounting devil in the heart
Rules the unrein'd ambition! Let it once
But play the monarch, and its haughty brow
Glows with a beauty that bewilders thought
And unthrones peace for ever.

—N. P. Willis.

VIEW OF THE LOUVRE.

SCHOOLS OF PAINTING; OR, THE LOUVRE IN 1814.

For gaining an idea of the general character, by which the different schools of painting are distinguished, the Louvre presents singular advantages, from the unparalleled collection of paintings of every school and description which are there to be

met with, and the facility with which you can there trace the progress of art from its first beginning to the period of its greatest perfection. And it is in this view that the collection of these works into one museum, however much to be deplored as the work of unprincipled ambition, and however much it may have diminished the impression which particular objects, from the influence of association, produced in their native place, is yet calculated to produce the greatest of all improvements in the progress of the art, by divesting particular schools and particular works of the unbounded influence which the effects of early association or the prejudices of national feeling have given them in their original situation, and placing them where their real nature is to be judged of by a more extended circle, and subjected to the examination of more impartial sentiments.

The first hall of the Louvre, in the picture gallery, is filled with paintings of the French School. The principal artists whose works are here exhibited are Le Brun, Gaspar and Nicholas Poussin, Claude Lorraine, Vernet; and the modern painters Gerard and David. The general character of the school of French historical painting is the expression of *passion* and *violent emotion*. The coloring is for the most part brilliant, the canvas crowded with figures, and the incident selected that in which the painter might have the best opportunity of displaying his knowledge of the human frame, or the varied expression of the human countenance. In the pictures of the modern school of French painting this peculiarity is pushed to an extravagant length, and, fortunately for the art, displays the false principles on which the system of their composition is founded. The moment seized is uniformly that of the strongest and most violent passion; the principal actors in the piece are represented in a state of frenzied exertion; and the whole anatomical knowledge of the artist is displayed in the endless contortions into which the human frame is thrown. In David's celebrated picture of the Three Horatii, this peculiarity appears in the most striking light. The works of this artist may excite admiration, but it is the limited and artificial admiration of the schools; of those who have forgot the end of the art in the acquisition of the technical knowledge with which it is accompanied, or the display of the technical powers which its execution involves.

The paintings of Vernet in this collection are perhaps the finest specimens of that beautiful master, and they entitle him to a higher place in the estimation of mankind than he seems yet

to have obtained from the generality of observers. There is a delicacy of coloring, a unity of design, and a harmony of expression in his works which accord well with the simplicity of the subjects which his taste has selected, and the general effect which it was his object to produce. In the representation of the sun dispelling the mists of a cloudy morning; of his setting rays gilding the waves of a western sea; or of that undefined beauty which moonlight throws over the objects of nature, the works of this artist are perhaps unrivalled.

The paintings of Claude are by no means equal to what might have been expected from the celebrity which his name has acquired, or the matchless beauty which the engravings from him possess. They are but eleven in number, and cannot be in any degree compared with those which are to be found in Mr. Angerstein's collection.

The Dutch and Flemish school, to which you next advance, possesses merit, and is distinguished by a character of a very different description. It was the well-known object of this school to present an exact and faithful *imitation of nature;* to exaggerate none of its faults, and enhance none of its excellences, but exhibit it as it really appears to the eye of an ordinary spectator. Its artists selected, in general, some scene of humor or amusement, in the discovery of which the most ignorant spectators might discover other sources of pleasure from those which the merit of the art itself afforded. They did not pretend to aim at the exhibition of passion or powerful emotion—their paintings, therefore, are free from that painful display of theatrical effect which characterizes the French school; their object was not to represent those deep scenes of sorrow or suffering which accord with the profound feelings which it was the object of the Italian school to awaken—they want, therefore, the dignity and grandeur which the works of the greater Italian painters possess. Their merit consists in the faithful delineation of those ordinary scenes and common occurrences which are familiar to the eye of the most careless observer. The power of the painter, therefore, could be displayed only in the minuteness of the finishing, or the brilliancy of the effect: and he endeavored by the powerful contrast of light and shade, to give a higher character to his works than the nature of their subjects could otherwise admit. The pictures of Teniers, Ostade, and Gerard Dow possess these merits, and are distinguished by this character in the highest degree; but their qualities are so well known as to render any ob-

servations on them superfluous. There is a very great collection here preserved of the works of Rembrandt, and their design and effect bear, in general, a higher character than belongs to most of the works of this celebrated master.

In one respect, the collection in the Louvre is altogether unrivalled, in the number and beauty of the Wouvermans which are there to be met with; nor is it possible, without having seen it, to appreciate, with any degree of justice, the variety of design, the accuracy of drawing, or delicacy of finishing which distinguish his works from those of any other painter of a similar description. His works for the most part are crowded with figures; his subjects are, in general, battle pieces, or spectacles of military pomp, or the animated scenes which the chase presents; and he seems to have exhausted all the efforts of his genius in the variety of incident and richness of execution which these subjects are fitted to afford.

The pictures of Vandyke and Rubens belong to a much higher school than that which rose out of the wealth and limited taste of the Dutch people. There are sixty pictures of the latter of these masters in the Louvre, and combined with the celebrated gallery in the Luxembourg palace, they form the finest assemblage of them which is to be met with in the world. The character of his works differs essentially from both that of the French and the Dutch schools: he was employed not in painting cabinet pictures for wealthy merchants, but in designing great altar pieces for splendid churches, or commemorating the glory of sovereigns in imperial galleries. The greatness of his genius rendered him fit to attempt the representation of the most complicated and difficult objects; but in the confidence of this genius he seems to have lost sight of the genuine object of composition in his art. He attempts what it is impossible for painting to accomplish. He aims at telling a whole story by the expression of a single picture; and seems to pour forth the profusion of his fancy by crowding his canvas with a multiplicity of figures which serve no other purpose than that of showing the endless power of creation which the author possessed.

It is in the Italian school, however, that the collection in the Louvre is most unrivalled, and it is from its character that the general tendency of the modern school of historical painting is principally to be determined.

The general object of the Italian school appears to be the expression of *passion*. The peculiar subjects which its painters

were called on to represent, the sufferings and death of our Saviour, the varied misfortunes to which His disciples were exposed, or the multiplied persecutions which the early fathers of the Church had to sustain, inevitably prescribed the object to which their genius was to be directed, and the peculiar character which their works were to assume. They have all, accordingly, aimed at the expression of passion, and endeavored to excite the pity or awaken the sympathy of the spectator; though the particular species of passion which they have severally selected has varied with the turn of mind which the artist possessed.

The works of Domenichino and of the Caraccis, of which there are a very great number, incline, in general, to the representation of what is dark and gloomy in character, or what is terrific and appalling in suffering. The subjects which the first of these masters has in general selected are the cells of monks, the energy of martyrs, the death of saints, or the sufferings of the crucifixion; and the dark-blue coldness of his coloring, combined with the depth of his shadows, accord well with the gloomy character which his compositions possess. The Caraccis, amid the variety of objects which their genius has embraced, have dwelt in general upon the expression of sorrow, of that deep and profound sorrow which the subjects of sacred history were so fitted to afford, and which was so well adapted to that religious emotion which it was their object to excite.

Guido Reni, Carlo Maratti, and Murillo are distinguished by a gentler character; by the expression of tenderness and sweetness of disposition; and the subjects which they have chosen are, for the most part, those which were fitted for the display of this predominant expression—the Holy Family, the Flight into Egypt, the Youth of St. John, the Penitence of the Magdalene. Their coloring is seldom brilliant, there is a subdued tone pervading the greater part of their pictures; and they have limited themselves, in general, to the delineation of a single figure or a small group in which a single character of mind is prevalent.

There are only six paintings by Salvator Rosa in this collection, but they bear that mild and original character which is proverbially known to belong to the works of this great artist. One of his pieces is particularly striking, a skirmish of horse, accompanied by all the scenery in which he so particularly delighted. In the foreground is the ruins of an old temple, with its lofty pillars finely displayed in shadow above the summits of the horizon; in the middle distance the battle is dimly dis-

cerned through the driving rain, which obscures the view; while the background is closed by a vast ridge of gloomy rocks, rising into a dark and tempestuous sky. The character of the whole is that of sullen magnificence; and it affords a striking instance of the power of great genius to mould the most varied objects in nature into the expression of one uniform poetical feeling.

Very different is the expression which belongs to the softer pictures of Correggio—of that great master whose name is associated in every one's mind with all that is gentle or delicate in the imitation of nature. Perhaps it was from the force of this impression that his works seldom completely come up to the expectations which are formed of them. Their general character is that of tenderness and delicacy: there is a softness in his shading of the human form which is quite unrivalled, and a harmony in the general tone of his coloring which is in perfect unison with the characteristic expression which it was his object to produce.

There is but one picture by Carlo Dolci in the Louvre; but it alone is sufficient to mark the exquisite genius which its author possessed. It is of small dimensions, and represents the Holy Family, with the Saviour asleep. The finest character of design is here combined with the utmost delicacy of execution; the softness of the shadows exceeds that of Correggio himself; and the dark-blue coloring which prevails over the whole is in perfect unison with the expression of that rest and quiet which the subject requires.

Without the softness of shading or the harmony of color which Correggio possessed, the works of Raphael possess a higher character, and aim at the expression of a sublimer feeling than those of any other artist whom modern Europe has produced. Like all his brethren, he has often been misled from the real object of his art, and tried, in the energy of passion, or the confused expression of various figures, to multiply the effect which his composition might produce. It is in his smaller pieces that the genuine character of Raphael's paintings is to be seen—in the figure of St. Michael subduing the demon; in the beautiful tenderness of the Virgin and Child; in the unbroken harmony of the Holy Family; in the wildness and piety of the infant St. John;—scenes in which all the objects of the picture combine for the preservation of one uniform character, and where the native fineness of his mind appears undisturbed by the dis-

play of temporary passion, or the painful distraction of varied suffering.

There are no pictures of the English school in the Louvre, for the arms of France never prevailed in our island. From the splendid character, however, which it early assumed under the distinguished guidance of Sir Joshua Reynolds, and from the high and philosophical principles which he at first laid down for the government of the art, there is every reason to believe that it ultimately will rival the celebrity of foreign genius. And it is in this view that the continuance of the gallery of the Louvre, in its present situation, is principally to be wished by the English nation—that the English artists may possess so near their own country so great a school for composition and design ; that the imperfections of foreign schools may enlighten the views of English genius ; and that the conquests of the French arms, by transferring the remains of ancient taste to these northern shores, may throw over its rising art that splendor which has hitherto been confined to the regions of the sun. —ALISON.

THE ART OF ENGRAVING.

THE art of engraving is of extreme antiquity. If it cannot with any certainty be traced to antediluvian times, in the case of Tubal Cain, the son of Lamech, who is spoken of as "an artificer in brass and iron," yet there are distinct traces of it in the patriarchal age, for carved images were found in the family of Abraham, and these, if we may judge by analogy with the most ancient remains of carving extant, were merely rude outlines on a flat surface, and therefore bore a strong resemblance to engraving. During the sojourn of the Israelites in Egypt, they probably exercised this art after the Egyptian manner, which consisted of hieroglyphical figures cut in outline on metal and stone. But during their wanderings in the desert, two men, Bezaleel and Aholiab, were specially set apart to "devise curious works in gold, silver, and brass, and in the cutting of stones to set them, and in carving the wood," for the service of the tabernacle ; and of them it is declared that God "filled them with wisdom of heart, to work all manner of work of the engraver," (Exod. xxxv. 35.)

The rude methods of Egypt are supposed to have been adopted by the Phœnicians, and thus to have been conveyed to Greece,

where, in Homer's time, the art of engraving had considerably advanced. One of its earliest uses in that civilized nation was in the delineation of maps on metal plates. Specimens of the art as practised in Etruria are thought to be of a very remote antiquity, and are quite capable of being printed from, as has been proved by actual experiment. But the idea of filling in these rude outlines with ink, and taking impressions from them, was reserved to later times. Thus the ancients just missed a discovery which now forms the principal element of our progress. This is the more remarkable when we remember that they knew how to take impressions of seals and stamps, in wax, clay, and other soft bodies, and that they seem to have had stamps with separate letters engraved upon them.

The art of engraving comprises three great divisions, for which appropriate technical terms have been found by referring to the Greek language. Copperplate engraving is named *Chalcography*, from the Greek words signifying *copper* and *I inscribe;* wood-engraving *Xylography*, from *wood* and *I inscribe;* engraving on stone *Lithography*, from *a stone* and *I inscribe.*

The first of these, or the art of engraving on copper, and taking impressions from the engraved plates, is ascribed to a native of Florence, named Finiguerra, who flourished in the fifteenth century. He was a skilful workman in a species of handicraft then largely practised, namely, the engraving of church ornaments and other articles, and filling the engraved parts with a black composition of silver and lead. This was called working *in mello*, and had a good effect, as may be seen by remaining specimens.

It is said that Finiguerra having on one occasion cast some melted sulphur on his engraving to try its effect previously to putting on the black composition, observed, on removing the sulphur, that some dust and charcoal which had gathered in the hollows gave an impression of what he had engraven. On this he tried the effect of moistened paper, pressed down on the engraving with a roller, and met with a complete success. Other goldsmiths and engravers followed in the steps of Finiguerra, and this important discovery soon became widely diffused. Throughout the sixteenth century improvements in this art were numerous in Italy, and the skill of Marc Antonio Raimondi, and the students of his school, raised the fame of the Italian engravers to a high pitch.

Meanwhile Germany was making rapid progress in the same

art, first practised in that country by Martin Schongauer, and carried to eminence by Albert Durer and his followers. The artists of the Flemish and Dutch schools, together with the skilful engravers of France, also contributed to spread throughout Europe the triumphs of this interesting branch of knowledge.

The art of engraving was early known in England. Printing was discovered during the first half of the fifteenth century, and engraving quickly followed, as is proved by Caxton's "Golden Legend," printed in 1483, and ornamented with numerous cuts. Copperplate engravings appeared in Vesalius's "Anatomy," printed in England, in Latin, in 1545. These were the work of Thomas Geminus or Geminie, the first English engraver of whom we have a distinct account. A translation of the work by Udall, dedicated to Edward VI., contained, in the preface, the following passage:—"Accepte, jentill reader, this Tractise of Anatomie, thankfully interpreting the labors of Thomas Gemini the workman. He that, with his great charge, watch, and travayle, hath set out these figures in portraiture, will most willingly be amended, or better perfected of his own workmanship, if admonished." The first maps of English counties were engraved by Christopher Saxton in 1579.

In the reign of Charles I. an engraver-royal (Voerst, a native of Holland) was appointed, and the art received much encouragement from the king and the Earl of Arundel. The celebrated Vandyke assisted its progress by his vigorous and expressive etchings. Various improvements were made, Prince Rupert discovered *mezzo tinto*, and for a brief period engraving flourished greatly; but the bad taste and dissolute manners of the succeeding reign checked its progress, and had the worst effect on the art. Its subsequent revival and brilliant success in the hands of Hogarth and his contemporaries, and its high eminence at the present day, present too extensive a field to be traversed here.

—Hinckley.

POWER OF MUSIC.

The effect of music in raising the energies of the mind, or what we commonly call *animal spirits*, was obvious to early observation. Its power of attracting strong attention may in some cases have appeared to affect even those who labored under a

considerable degree of mental disorder. Homer, whose heroes exhibit high passions but not refined manners, represents the Grecian army as employing music to stay the raging of the plague. The Jewish nation, in the time of King David, appears not to have been much further advanced in civilization; accordingly, we find David employed in his youth to remove the mental derangement of Saul by his harp. This method of cure was suggested as a common one in those days, by Saul's servants; and the success is not mentioned as a miracle. Pindar, with poetic licence, speaks of Æsculapius healing acute disorders with soothing songs; but Æsculapius, whether man or deity, or between both, is a physician of the days of barbarism and fable. Pliny scouts the idea that music should affect real bodily injury, but quotes Homer on the subject; mentions Theophrastus as suggesting a tune for the cure of the hip gout, and Plato as entertaining a fancy that it had a good effect when limbs were out of joint, and likewise that Varro thought it good for the gout. The ancients, indeed, record miracles in the tales they relate of the medicinal powers of music. A fever is removed by a song, and deafness is cured by a trumpet, and the pestilence is chased away by the sweetness of a harmonious lyre. That deaf people can hear best in a great noise, is a fact alleged by some moderns, in favor of the ancient story of curing deafness by a trumpet. "Dr. Wills tells us," says Dr. Burney, "of a lady who could hear only while a drum was beating, inasmuch that her husband, the account says, hired a drummer as her servant, in order to enjoy the pleasure of her conversation."

Jackson of Exeter, in reply to the question of Dryden, "What passion cannot music raise or quell?" sarcastically returns, "What passion *can* music raise or quell?" Would not a savage who had never listened to a musical instrument, feel certain emotions at listening to one for the first time? But civilized man is, no doubt, particularly affected by *association of ideas*, as all pieces of national music evidently prove.

The *Ranz des Vaches*, mentioned by Rousseau in his "Dictionary of music," though without anything striking in the composition, has such a powerful influence over the Swiss, and impresses them with so violent a desire to return to their own country, that it is forbidden to be played in the Swiss regiments in the French service, on pain of death. There is also a Scotch tune, which has the same effect on some of our North Britons. In one of our battles in Calabria, a bagpiper of the 78th Highland Regi-

ment, when the light infantry charged the French, posted himself on the right, and remained in his solitary situation during the whole of the battle, encouraging the men with a famous Highland charging tune; and upon the retreat and complete rout of the French changed it to another, equally celebrated in Scotland, upon the retreat of, and victory over, an enemy. His next-hand neighbor guarded him so well that he escaped unhurt. This was the spirit of the "Last Minstrel," who infused courage among his countrymen by possessing it in so animated a degree and in so venerable a character.

—Isaac Disraeli.

MUSIC BY MOONLIGHT.

(From the "Merchant of Venice.")

How sweet the moonlight sleeps upon this bank!
Here will we sit, and let the sounds of music
Creep in our ears; soft stillness and the night
Become the touches of sweet harmony.
Sit, Jessica: Look how the floor of heaven
Is thick inlaid with patines of bright gold;
There's not the smallest orb which thou behold'st,
But in his motion like an angel sings,
Still quiring to the young-eyed cherubins:
Such harmony is in immortal souls;
But whilst this muddy vesture of decay
Doth grossly close it in, we cannot hear it.
Come, ho, and wake Diana with a hymn;
With sweetest touches pierce your mistress' ear,
And draw her home with music.
You are never merry, when you hear sweet music.
The reason is, your spirits are attentive:
For do but note a wild and wanton herd,
Or race of youthful and unhandled colts,
Fetching mad bounds, bellowing, and neighing loud,
Which is the hot condition of their blood;
If they but hear perchance a trumpet sound,
Or any air of music touch their ears,
You shall perceive them make a mutual stand,
Their savage eyes turn'd to a modest gaze,
By the sweet power of music: therefore the poet
Did feign that Orpheus drew trees, stones, and floods;
Since nought so stockish, hard, and full of rage,
But music for the time doth change his nature.
The man that hath no music in himself,

Nor is not moved with concord of sweet sounds,
Is fit for treasons, stratagems, and spoils ;
The motions of his spirit are dull as night,
And his affections dark as Erebus :
Let no such man be trusted.—Mark the music.

—SHAKESPEARE.

CAXTON EXAMINING HIS FIRST PROOF-SHEET.

THE ART OF PRINTING.

THERE is some probability that this art originated in China, where it was practised long before it was known in Europe. Some European traveller might have imported the hint. That the Romans did not practise the art of printing cannot but excite our astonishment, since they actually used it, unconscious of their rich possession. I have seen Roman stereotypes, or immovable printing types, with which they stamped their pottery. How, in daily practising the art, though confined to this object, it did not occur to so ingenious a people to print their literary works, is not easily to be accounted for.

The first printing press in Europe seems to have been that set

up by Gutenberg in Mentz or Strasburg, it is doubtful which. About the year 1450, Laurence Costar of Haarlem, who lived about the same time, is sometimes looked upon as the instructor of Gutenberg, in the art of printing. The tradition of the devil and Dr. Faustus was said to have been derived from the odd circumstances under which the Bibles of Gutenberg's partner, Fust, appeared to the world. When Fust had printed off a considerable number of copies of the Bible to imitate those which were commonly sold as manuscript, he undertook the sale of them at Paris. It was his interest to conceal the discovery, and to pass off his printed copies for manuscripts. But, enabled to sell his Bibles at sixty crowns, while the other scribes demanded five hundred, this raised universal astonishment, and still more when he produced copies as fast as they were wanted, and even lowered his price. The uniformity of the copies increased the wonder. Informations were given in to the magistrates against him as a magician; and in searching his lodgings a great number of copies were found. The red ink—and Fust's red ink was peculiarly brilliant—which embellished his copies was said to be his blood; and it was solemnly adjudged that he was in league with the infernals. Fust, at length, was obliged, to save himself from a bonfire, to reveal his art to the Parliament of Paris, who discharged him from all prosecution in consideration of the wonderful invention.

When first the art of printing was discovered, they only made use of one side of a leaf; they had not yet found out the expedient of impressing the other. Afterwards they thought of pasting the blank sides, which made them appear like one leaf. Their blocks were made of soft woods, and their letters were carved; but, frequently breaking, the expense and trouble of carving and gluing new letters suggested our movable types, which have produced an almost miraculous celerity in this art. The modern stereotype, consisting of entire pages in solid blocks of metal, and not being liable to break like the soft wood at first used, has been profitably employed for works which require to be frequently reprinted.

When their editions were intended to be curious, they omitted to print the initial letter of a chapter; they left that blank space to be painted or illuminated, to the fancy of the purchaser. Several ancient volumes of these early times have been found where these letters are wanting, as they neglected to have them painted. The initial carved letter, which is generally a fine

woodcut, among our printed books, is evidently a remains or imitation of these ornaments.

The invention of what is now called the *Italic* letter in printing was made by Aldus Manutius, an Italian publisher in the first part of the sixteenth century. He observed the many inconveniences resulting from the vast number of abbreviations which were then so frequent among the printers, that a book was difficult to understand; a treatise was actually written on the art of reading a printed book, and this addressed to the learned! He contrived an expedient, by which these abbreviations might be entirely got rid of, and yet books suffer little increase in bulk. This he effected by introducing what is now called the *Italic* letter, though it formerly was distinguished by the name of the inventor, and called the *Aldine*.

Caxton and his successor, Wynken de Worde, were our own earliest printers. Caxton was a wealthy merchant, who, in 1464, being sent by Edward IV. to negotiate a commercial treaty with the Duke of Burgundy, returned to his country with this invaluable art. The first works which issued from his press were "The Game of Chess," and the "Poems of Chaucer."

—*Adapted from* DISRAELI.

THE NOBLE REVENGE.

A YOUNG OFFICER (in what army, no matter) had so far forgotten himself, in a moment of irritation, as to strike a private soldier, full of personal dignity, (as sometimes happens in all ranks,) and distinguished for his courage. The inexorable laws of military discipline forbade to the injured soldier any practical redress—he could look for no retaliation by acts. Words only were at his command; and in a tumult of indignation, as he turned away, the soldier said to his officer that he would "make him repent it." This, wearing the shape of a menace, naturally rekindled the officer's anger, and intercepted any disposition which might be rising within him towards a sentiment of remorse; and thus the irritation between the two young men grew hotter than before. Some weeks after this a partial action took place with the enemy. Suppose yourself a spectator, and looking down into a valley occupied by the two armies. They are facing each other, you see, in martial array. But it is no more than a skirmish which is going on: in the course of which, however, an occasion suddenly arises for a desperate service. A redoubt, which has fallen into

the enemy's hands, must be recaptured at any price, and under circumstances of almost hopeless difficulty. A strong party has volunteered for the service; there is a cry for somebody to head them; you see a soldier step out from the ranks to assume this dangerous leadership; the party moves rapidly forward; in a few minutes it is swallowed up from your eyes in clouds of smoke; for one half-hour, from behind these clouds, you receive hieroglyphic reports of bloody strife—fierce repeating signals, flashes from the guns, rolling musketry, and exulting hurrahs advancing or receding, slackening or redoubling.

At length all is over; the redoubt has been recovered; that which was lost is found again; the jewel which had been made captive is ransomed with blood. Crimsoned with glorious gore, the wreck of the conquering party is relieved and at liberty to return.

From the river you see it ascending. The plume-crested officer in command rushes forward, with his left hand raising his hat in homage to the blackened fragments of what once was a flag, whilst, with his right hand, he seizes that of the leader, though no more than a private from the ranks. That perplexes you not; mystery you see none in that. For distinctions of order perish, ranks are confounded, "high and low" are words without a meaning, and to wreck goes every notion or feeling that divides the noble from the noble, or the brave man from the brave. But wherefore is it that now, when suddenly they wheel into mutual recognition, suddenly they pause? This soldier, this officer—who are they? O reader! once before they had stood face to face—the soldier it is that was struck; the officer it is that struck him. Once again they are meeting, and the gaze of armies is upon them. If for a moment a doubt divides them, in a moment the doubt has perished. One glance exchanged between them publishes the forgiveness that is sealed for ever. As one who recovers a brother whom he had accounted dead, the officer sprang forward, threw his arms around the neck of the soldier, and kissed him, as if he were some martyr glorified by that shadow of death from which he was returning: whilst on his part, the soldier stepping back, and carrying his open hand through the beautiful motions of the military salute to a superior, makes this immortal answer—that answer which shut up for ever the memory of the indignity offered to him, even for the last time alluding to it: "Sir," he said, "I told you before that I would make you repent it."

—De Quincey.

MY OWN PLACE.

WHOEVER I am, wherever my lot,
Whatever I happen to be,
Contentment and Duty shall hallow the spot
That Providence orders for me:
No covetous straining and striving to gain
One feverish step in advance,—
I know my own place, and you tempt me in vain
To hazard a change and a chance.

I care for no riches that are not my right,
No honour that is not my due;
But stand in my station, by day and by night,
The will of my Master to do;
He lent me my lot, be it humble or high,
And set me my business here,
And whether I live in His service, or die,
My heart shall be found in my sphere.

If wealthy, I stand as the steward of my King,
If poor, as the friend of my Lord,
If feeble, my prayers and my praises I bring,
If stalwart, my pen or my sword;
If wisdom be mine, I will cherish His gift,
If simpleness, bask in His love,
If sorrow, His hope shall my spirit uplift,
If joy, I will throne it above!

The good that it pleases my God to bestow,
I gratefully gather and prize:
The evil,—it can be no evil, I know,
But only a good in disguise;
And whether my station be lowly or great,
No *duty* can ever be mean,
The factory-cripple is fix'd in his fate
As well as a king or a queen!

For Duty's bright livery glorifies all
With brotherhood, equal and free,
Obeying, as children, the heavenly call,
That places us where we should be;
A servant,—the badge of my servitude shines
As a jewel invested by Heaven;
A monarch, remember that justice assigns
Much service, where so much is given.

Away, then, with "helpings" that humble and harm,
Though "bettering" trips from your tongue;

Away ! for your folly would scatter the charm
That round my proud poverty hung ;
I felt that I stood like a man at my post,
Though peril and hardship were there,—
And all that your wisdom would counsel me most
Is—"Leave it ; do better elsewhere."

If "better" were better indeed, and not "worse,"
I might go ahead with the rest,
But many a gain and a joy is a curse,
And many a grief for the best :
No !—duties are all the "advantage" I use ;
I pine not for praise nor for pelf,
And as to ambition, I care not to choose
My better or worse for myself !

I will not, I dare not, I cannot !—I stand
Where God has ordain'd me to be,
An honest mechanic,—or lord in the land—
He fitted my calling for me :
Whatever my state, be it weak, be it strong,
With honor, or sweat, on my face,
This, this is my glory, my strength, and my song,
I stand, like a star, in *my place*. —TUPPER.

ANCIENT AND MODERN FARMING.

IN early times, when the population was scattered widely over the land, and their wants were few and easily satisfied, the spontaneous products of the earth, scanty as they were, would amply suffice. But as the people increased in numbers, and civilization progressed, attempts would be made to extend the products of the land by the efforts of industry and skill. The cereal crops would then be cultivated, and farinaceous food used to supplement the spontaneous herbage of the soil. But the system of culture this discovery inaugurated was confined solely to the preparing of the land to receive the seed, not to any attempts to stimulate its productiveness. What the land naturally yielded would be considered as the extent of its capability. The nature of all agricultural processes for ages was simple in the extreme, progress being retarded by the devastating wars and civil discords which for many ages afflicted all the nations of Europe. The husbandman reaped his tiny crop beneath the shade of the feudal castle, and was ready at the shout of the warder, or the trumpet call, to throw down the sickle and seize the sword ; and

it was long ere he left this sheltering shade, and cultivated the valleys, and crept up the hill-side; dotting the smiling landscape with his flocks of sheep and cattle, and adding to the beauty of the scene by the glistening glories of the summer corn. But long after intestine wars had ceased, when the rusty firelock or the notched sabre were the only relics of the troublous times we have alluded to, agriculture still presented the same torpid symptoms, and little evidence was shown of the desire to increase the natural productiveness of the soil by improved methods of treatment. It was very early discovered that the cereal crops were exhaustive ones—that is, if crop after crop of the same grain was raised from the same patch of soil, it was observed soon to be incapable of further production, at least to any amount. This proved that the crop withdrew certain properties of the soil. In districts where land was plentiful and easily obtained, this difficulty would be got rid of by cultivating new patches of soil, just in the same way now followed by the careless farmer in America, who crops until he exhausts his land, when he moves off to another "location," where virgin land, abounding in all the elements of fertility, is to be had, which in its turn undergoes the same process of exhaustion. In process of time, the lands which were discarded as exhausted and incapable of producing crops would be returned to, or taken into cultivation by other hands, the result being that crops would be raised as before. This necessarily attracting attention, and the fact becoming registered, that exhausted land would again become productive if allowed to remain uncultivated—that is, at rest—for a certain period, the "fallow" system was inaugurated. The old Roman system consisted in raising a crop of grain one year, allowing the land to remain at rest the next. In this country * a variety of circumstances tended to introduce a peculiar system of agriculture: the exigencies of a population concentrated in a much greater degree than in any other of the European states; the length of the winter, and the uncertainty even of the favorable months; the comparative scarcity and dearness of land, and the existence of a higher degree of exhaustive property in the cereals than in the southern countries; the natural richness of the herbage of the fields—all induced a comparatively peculiar system. As daily experience registered facts, the truth would soon become apparent that it was not necessary to wait for the land becoming again productive by

* Britain; but applicable to British America in many particulars.

allowing it to lie a comparatively long period idle; that the fertilizing properties could be restored to it by the addition of manure, this being obtained from the stock of the farm—the cattle, sheep, horses, cows, &c. The increase, therefore, of the cereal productiveness of the land evidently depended upon the amount of manure placed at the disposal of the farmer; hence the efforts to increase the number of stock kept. At first the system was much aided by the spontaneous growth of large crops of grass—one of the peculiarities of our climate. The plan adopted, therefore, was to have half the farm devoted to pasture lands, and half to the cultivation of cereals, a portion of this latter half being kept in fallow. But the exigencies of our climate placed a limit to the number of cattle kept, and, in consequence, the amount of manure produced. For a large portion of the year the herbage is liable to be frozen or covered with snow; the animals are, in consequence, unable to partake of it. It became necessary, therefore, if the stock was to be increased on our farms, to provide a supply of food by which to maintain the animals during the severe weather of winter, these being housed, instead of starving in the open fields, as in the old system. The want being thus felt, it was in time supplied by the introduction of what are known as the *green crops*—artificial grasses, and roots, as turnips, exclusively raised for the maintenance of the stock. As this system was adopted, the breadth of land under fallow, and latterly that under the cereal crops, was diminished. In process of time the grand principle which completely revolutionized agriculture was introduced; we refer to the "Rotation of Crops," or the "Four Year Course System." This was founded upon the theory that forage plants derive the principal elements of their growth from the atmosphere, giving to the soil more than they take from it, and afford in addition a large amount of manure when consumed by stock; thus they contribute in two ways to the refertilization of the soil exhausted by the cereal crops, which derived their nutriment, to a great extent, from the inorganic or mineral constituents of the soil. This system once fairly established, all the other improvements of modern agriculture, such as drainage, subsoiling, irrigation, and steam cultivation, followed in comparatively quick succession. —BURN'S *Outline of Modern Farming.*

WHAT IS NOBLE?

What is noble?—to inherit
Wealth, estate, and proud degree?—
There must be some other merit
Higher yet than these for me!—
Something greater far must enter
Into life's majestic span,
Fitted to create and centre
True nobility in man.

What is noble?—'tis the finer
Portion of our mind and heart,
Link'd to something still diviner
Than mere language can impart:
Ever prompting—ever seeing
Some improvement yet to plan;
To uplift our fellow-being,
And, like man, to feel for man!

What is noble?—is the sabre
Nobler than the humble spade?—
There's a dignity in labor
Truer than e'er Pomp array'd!
He who seeks the mind's improvement
Aids the world, in aiding mind!
Every great commanding movement
Serves not one, but all mankind.

O'er the forge's heat and ashes,—
O'er the engine's iron head,—
Where the rapid shuttle flashes,
And the spindle whirls its thread:
There is labor, lowly tending
Each requirement of the hour,—
There is genius, still extending
Science, and its world of power!

'Mid the dust, and speed, and clamor,
Of the loom-shed and the mill;
'Midst the clank of steam and hammer,
Great results are growing still!
Though too oft by fashion's creatures,
Work and workers may be blamed,
Commerce need not hide its features,—
Industry is not ashamed!

What is noble?—that which places
Truth in its enfranchised will,

Leaving steps—like angel traces,
That mankind may follow still!
E'en through scorn's malignant glances
Prove him *poorest* of his clan,
He's the *noble*—who advances
Freedom and the cause of man! —SWAIN.

INDUSTRY ESSENTIALLY SOCIAL.

IN consequence of the union of two principles in the human frame, every act that a man performs requires the agency both of body and mind. His mind cannot see but through the optic eye-glass; nor hear, till the drum of his ear is affected by the vibrations of the air. If he would speak, he puts in action the complex machinery of the vocal organs; if he writes, he employs the muscular system of the hands; nor can he even perform the operations of pure thought except in a healthy state of the body. A fit of the toothache, proceeding from the irritation of a nerve about as big as a cambric thread, is enough to drive an understanding, capable of instructing the world, to the verge of insanity. On the other hand, there is no operation of manual labor so simple, so mechanical, which does not require the exercise of perception, reflection, memory, and judgment; the same intellectual powers by which the highest truths of science have been discovered and illustrated.

The degree to which any particular action (or series of actions united into a pursuit) shall exercise the intellectual powers on the one hand, or the mechanical powers on the other, of course depends on the nature of that action. The slave, whose life, from childhood to the grave, is passed in the field; the New Zealander, who goes to war when he is hungry, devours his prisoners, and leads a life of cannibal debauch, till he has consumed them all, and then goes to war again; the Greenlander, who warms himself with the fragments of wrecks and driftwood thrown upon the glaciers, and feeds himself with blubber;—seem all to lead lives requiring but little intellectual action: and yet, as I have remarked, a careful reflection would show that there is not one, even of them, who does not, every moment of his life, call into exercise, though in a humble degree, all the powers of the mind. In like manner, the philosopher who shuts himself up in his cell, and leads a contemplative existence among books or instruments of science, seems to have no occasion to employ,

in their ordinary exercise, many of the capacities of his nature for physical action;—although he also, as I have observed, cannot act, or even think, but with the aid of his body.

This is unquestionably true. The same Creator who made man a mixed being, composed of body and soul, having designed him for such a world as that in which we live, has so constituted the world, and man who inhabits it, as to afford scope for great variety of occupations, pursuits, and conditions, arising from the tastes, characters, habits, virtues, and even vices, of men and communities. For the same reason, that though all men are alike composed of body and soul, yet no two men probably are exactly the same in respect to either—*so* provision has been made by the Author of our being for an infinity of pursuits and employments, calling out, in degrees as various, the peculiar powers of both principles.

But I have already endeavored to show that there is no pursuit and no action that does not require the united operation of both; and this of itself is a broad natural foundation for the union into one interest of all, in the same community, who are employed in honest work of any kind—viz., that, however various their occupations, they are all working with the same instruments, the organs of the body and the powers of the mind.

But we may go a step further, to remark the beautiful process by which Providence has so interlaced and wrought up together the pursuits, interests, and wants of our nature, that the philosopher, whose home seems less on earth than among the stars, requires, for the prosecution of his studies, the aid of numerous artificers in various branches of mechanical industry, and in return furnishes the most important facilities to the humblest branches of manual labor. Let us take, as a single instance, that of astronomical science. It may be safely said that the wonderful discoveries of modern astronomy, and the philosophical system depending upon them, could not have existed but for the *telescope*. The want of the telescope kept astronomical science in its infancy among the ancients. Although Pythagoras, one of the earliest Greek philosophers, by a fortunate exercise of sagacity, conceived the elements of the Copernican system, yet we find no general and practical improvement resulting from it. It was only from the period of the discoveries made by the telescope that the science advanced with sure and rapid progress. Now, the astronomer does not make telescopes. I presume it would

be impossible for a person who is employed in the abstract study of astronomical science to find time enough to comprehend its profound investigations, and to learn and practise the trade of making glass. It is mentioned as a remarkable versatility of talent in one or two eminent observers, that they have superintended the cutting and polishing of the glasses of their own telescopes. But I presume, if there never had been a telescope till some scientific astronomer had learned to mix, melt, and mould glass, such a thing would never have been heard of. It is not less true that those employed in making the glass could not, in the nature of things, be expected to acquire the scientific knowledge requisite for carrying on those arduous calculations applied to bring into a system the discoveries made by the magnifying power of the telescope. I might extend the same remark to the other materials of which a telescope consists. It cannot be used to any purpose of nice observation without being very carefully mounted on a frame of strong metal, which demands the united labors of the mathematical instrument maker and the brassfounder. Here, then, in taking but one single step out of the philosopher's observatory, we find he needs an instrument to be produced by the united labors of the mathematical instrument maker, the brassfounder, the glass-polisher, and the maker of glass,—four trades. He must also have an astronomical clock, and it would be easy to count up half a dozen trades which directly or indirectly are connected in making a clock. But let us go back to the *object glass* of the telescope. A glass factory requires a building and furnaces. The man who makes the glass does not make the building. But the stone and brick mason, the carpenter, and the blacksmith must furnish the greater part of the labor and skill required to construct the building. When it is built, a large quantity of fuel, wood, and wood-coal, or mineral coal of various kinds, or all together, must be provided; and then the materials of which the glass is made, and with which it is colored, some of which are furnished by commerce from different and distant regions, and must be brought in ships across the sea. We cannot take up any one of *these* trades without immediately finding that it connects itself with numerous others. Take for instance, the mason, who builds the furnace. He does not make his own bricks, nor burn his own lime; in common cases the bricks come from one place, the lime from another, the sand from another. The brickmaker does not cut down his own wood. It is carted or brought in boats to his

yard. The man who carts it does not make his own waggon; nor does the person who brings it in boats build his own boat. The man who makes the waggon does not make the tire. The blacksmith who makes the tire does not smelt the ore; and the forgeman who smelts the ore does not build his own furnace, (and there we get back to the point where we started,) nor dig his own mine. The man who digs the mine does not make the pickaxe with which he digs it, nor the pump with which he keeps out the water. The man who makes the pump did not discover the principle of atmospheric pressure, which led to pump-making: that was done by a mathematician at Florence, experimenting in his chamber on a glass tube. And here we come back again to our glass, and to an instance of the close connexion of scientific research with practical art. It is plain that this enumeration might be pursued till every art and every science were shown to run into every other. No one can doubt this who will go over the subject in his own mind, beginning with any one of the processes of mining and working metals, of shipbuilding and navigation, and the other branches of art and industry pursued in civilized communities.

If then, on the one hand, the astronomer depends for his telescope on the ultimate product of so many arts, in return his observations are the basis of an astronomical system, and of calculations of the movements of the heavenly bodies, which furnish the mariner with his best guide across the ocean. The prudent shipmaster would no more think of sailing for India without his "Practical Navigator," than he would without his compass; and this "Navigator" contains tables drawn from the highest walks of astronomical science. Every first mate of a vessel, who works a lunar observation to ascertain the ship's longitude, employs tables in which the most wonderful discoveries and calculations of La Place, and Newton, and Bowditch are interwoven.

I mention this as but one of the cases in which astronomical science promotes the service and convenience of common life; and, perhaps, when we consider the degree to which the modern extension of navigation connects itself with industry in all its branches, this may be thought sufficient. I will only add, that the cheap convenience of an almanac, which enters into the comforts of every fireside in the country, could not be enjoyed but for the labors and studies of the profoundest philosophers. Not that great learning or talent is now required to execute the astronomical calculations of an almanac, although no inconsider-

able share of each is needed for this purpose; but because even to perform these calculations requires the aid of tables which have been gradually formed on the basis of the profoundest investigations of the long line of philosophers who have devoted themselves to this branch of science. For, as we observed on the mechanical side of the illustration, it was not one trade alone which was required to furnish the philosopher with his instrument, but a great variety; so, on the other hand, it is not the philosopher in one department who creates a science out of nothing. The observing astronomer furnishes materials to the calculating astronomer, and the calculator derives methods from the pure mathematician, and a long succession of each for ages must unite their labors in a great result. Without the geometry of the Greeks, and the algebra of the Arabs, the infinitesimal analysis of Newton and Leibnitz would never have been invented.

Examples and illustrations equally instructive might be found in every other branch of industry. The man who will go into a cotton-mill, and contemplate it from the great water-wheel that gives the first movement, (and still more from the steam-engine, should that be the moving-power,) who will observe the parts of the machinery, and the various processes of the fabric, till he reaches the hydraulic press with which it is made into a ball, and the canal or railroad by which it is sent to market, may find every branch of trade, and every department of science, literally crossed, intertwined, interwoven with every other, like the woof and the warp of the article manufactured. Not a little of the spinning machinery is constructed on principles drawn from the demonstrations of transcendental mathematics; and the processes of bleaching and dyeing now practised are the results of the most profound researches of modern chemistry. And if this does not satisfy the inquirer, let him trace the cotton to the plantation where it grew, in Georgia or Alabama; the indigo to Bengal; the oil to the olive-gardens of Italy, or the fishing-grounds of the Pacific Ocean; let him consider the cotton-gin, the carding machine, the power-loom, and the spinning apparatus, and all the arts, trades, and sciences directly or indirectly connected with these, and I believe he will soon agree that one might start from a yard of coarse printed cotton, which costs ten cents, and prove out of it, as out of a text, that every art and science under heaven had been concerned in its fabric.

—Everett.

FROM "EDWARD II."

Murder of the King.

Berkeley Castle. The King is left alone with LIGHTBORN, *a murderer.*

Edw. Who's there? What light is that? wherefore comest thou?
Light. To comfort you, and bring you joyful news.
Edw. Small comfort finds poor Edward in thy looks.
Villain, I know thou comest to murder me.
Light. To murder you, my most gracious lord!
Far is it from my heart to do you harm.
The queen sent me to know how you were used,
For she relents at this your misery:
And what eyes can refrain from shedding tears,
To see a king in this most piteous state?
Edw. Weep'st thou already? list a while to me,
And then thy heart, were it is as Gurney's* is,
Or as Matrevis',* hewn from the Caucasus,
Yet will it melt ere I have done my tale.
This dungeon where they keep me is a sink
Wherein the filth of all the castle falls.
Light. O villains!
Edw. And there, in mire and puddle have I stood
This ten days' space; and lest that I should sleep.
One plays continually upon a drum.
They give me bread and water, being a king;
So that, for want of sleep and sustenance,
My mind's distemper'd, and my body's numb'd,
And whether I have limbs or no, I know not.
Oh, would my blood drop out from every vein,
As doth this water from my tatter'd robes!
Tell Isabel the queen I look'd not thus,
When for her sake I ran at tilt in France,
And there unhorsed the Duke of Cleremont.
Light. Oh, speak no more, my lord! this breaks my heart.
Lie on this bed, and rest yourself a while.
Edw. These looks of thine can harbor naught but death:
I see my tragedy written in thy brows.
Yet stay a while, forbear thy bloody hand,
And let me see the stroke before it comes,
That even then when I shall lose my life,
My mind may be more steadfast on my God.
Light. What means your highness to mistrust me thus?
Edw. What mean'st thou to dissemble with me thus?
Light. These hands were never stain'd with innocent blood,
Nor shall they now be tainted with a king's.

* His keepers.

Edw. Forgive my thought, for having such a thought.
One jewel have I left, receive thou this.
Still fear I, and I know not what's the cause,
But every joint shakes as I give it thee.
Oh, if thou harbor'st murder in thy heart,
Let this gift change thy mind, and save thy soul.
Know that I am a king · oh, at that name
I feel a hell of grief. Where is my crown?
Gone, gone, and do I still remain alive?
Light. You're overwatch'd, my lord; lie down and rest.
Edw. But that grief keeps me waking, I should sleep;
For not these ten days have these eyelids closed.
Now, as I speak they fall, and yet with fear
Open again. Oh, wherefore sitt'st thou here?
Light. If you mistrust me, I'll be gone, my lord.
Edw. No, no, for if thou mean'st to murder me,
Thou wilt return again; and therefore stay.
Light. He sleeps.
Edw. Oh, let me not die; yet stay, oh, stay a while.
Light. How now, my lord?
Edw. Something still buzzeth in mine ears,
And tells me if I sleep I never wake;
This fear is that which makes me tremble thus.
And therefore tell me, wherefore art thou come?
Light. To rid thee of thy life; Matrevis, come.
Edw. I am too weak and feeble to resist:
Assist me, sweet God, and receive my soul. —MARLOWE.

FROM "JULIUS CÆSAR."

SCENE—*The Forum.*

Enter BRUTUS *and* CASSIUS, *and a throng of* Citizens.

Cit. We will be satisfied; let us be satisfied.
Bru. Then follow me, and give me audience, friends.
Cassius, go you into the other street,
And part the numbers.
Those that will hear me speak, let them stay here;
Those that will follow Cassius, go with him;
And public reasons shall be render'd
Of Cæsar's death.
Be patient till the last.

Romans, countrymen, and lovers! hear me for my cause, and be silent, that you may hear: believe me for mine honor, and have respect to mine honor, that you may believe: censure me in your wisdom, and awake your senses, that you may the better judge. If there be any in this assembly, any dear friend of Cæsar's, to him I say, that Brutus' love

to Cæsar was no less than his. If then that friend demand why Brutus rose against Cæsar, this is my answer—Not that I loved Cæsar less, but that I loved Rome more. Had you rather Cæsar were living, and die all slaves, than that Cæsar were dead, to live all freemen? As Cæsar loved me, I weep for him; as he was fortunate, I rejoice at it; as he was valiant, I honored him: but as he was ambitious, I slew him. There are tears for his love; joy for his fortune; honor for his valor; and death for his ambition. Who is here so base that would be a bondman? If any, speak; for him have I offended. Who is here so rude that would not be a Roman? If any, speak; for him have I offended. Who is here so vile that will not love his country? If any, speak; for him have I offended. I pause for a reply.

All. None, Brutus, none.

Bru. Then none have I offended. I have done no more to Cæsar than you shall do to Brutus. The question of his death is enrolled in the Capitol; his glory not extenuated, wherein he was worthy; nor his offences enforced, for which he suffered death.

Enter ANTONY *and others, with* CÆSAR'S *body.*

Here comes his body, mourned by Mark Antony; who, though he had no hand in his death, shall receive the benefit of his dying, a place in the commonwealth; as which of you shall not? With this I depart—That, as I slew my best lover for the good of Rome, I have the same dagger for myself, when it shall please my country to need my death.

1*st Cit.* We'll bring him to his house with shouts and clamors.

Bru. Good countrymen, let me depart alone,
And, for my sake, stay here with Antony:
Do grace to Cæsar's corpse, and grace his speech
Tending to Cæsar's glories; which Mark Antony,
By our permission, is allow'd to make.
I do entreat you, not a man depart,
Save I alone, till Antony have spoke. [*Exit.*

1*st Cit.* Stay, ho! and let us hear Mark Antony.

Ant. Friends, Romans, countrymen, lend me your ears;
I come to bury Cæsar, not to praise him.
The evil that men do lives after them;
The good is oft interr'd with their bones;
So let it be with Cæsar. The noble Brutus
Hath told you Cæsar was ambitious;
If it were so, it was a grievous fault;
And grievously hath Cæsar answer'd it.
Here, under leave of Brutus and the rest,
(For Brutus is an honorable man;
So are they all, all honorable men,)
Come I to speak in Cæsar's funeral.
He was my friend, faithful and just to me:
But Brutus says he was ambitious:
And Brutus is an honorable man.

He hath brought many captives home to Rome,
Whose ransoms did the general coffers fill:
Did this in Cæsar seem ambitious?
When that the poor have cried, Cæsar hath wept:
Ambition should be made of sterner stuff!
Yet Brutus says he was ambitious:
And Brutus is an honorable man.
You all did see, that on the Lupercal
I thrice presented him a kingly crown,
Which he did thrice refuse. Was this ambition?
Yet Brutus says he was ambitious:
And, sure, he is an honorable man.
I speak not to disprove what Brutus spoke,
But here I am to speak what I do know.
You all did love him once—not without cause;
What cause withholds you then to mourn for him?
O judgment, thou art fled to brutish beasts,
And men have lost their reason. Bear with me;
My heart is in the coffin there with Cæsar,
And I must pause till it come back to me.

1st Cit. Methinks there is much reason in his sayings.

2d Cit. Poor soul! his eyes are red as fire with weeping.

3d Cit. There's not a nobler man in Rome than Antony.

4th Cit. Now mark him, he begins again to speak.

Ant. But yesterday the word of Cæsar might
Have stood against the world: now lies he there,
And none so poor as do him reverence.
O masters, if I were disposed to stir
Your hearts and minds to mutiny and rage,
I should do Brutus wrong, and Cassius wrong,
Who, you all know, are honorable men:
I will not do them wrong: I rather choose
To wrong the dead, to wrong myself, and you,
Than I will wrong such honorable men.
But here's a parchment, with the seal of Cæsar,
I found it in his closet; 'tis his will:
Let but the commons hear this testament,
(Which, pardon me, I do not mean to read,)
And they would go and kiss dead Cæsar's wounds,
And dip their napkins in his sacred blood;
Yea, beg a hair of him for memory,
And, dying, mention it within their wills,
Bequeathing it as a rich legacy
Unto their issue.

4th Cit. We 'll hear the will. Read it, Mark Antony.

Ant. You will compel me then to read the will?
Then make a ring about the corpse of Cæsar,

And let me show you him that made the will.
Shall I descend? And will you give me leave?
Cit. Stand back! room! bear back!
Ant. If you have tears, prepare to shed them now.
You all do know this mantle: I remember
The first time ever Cæsar put it on;
'Twas on a summer's evening, in his tent,
That day he overcame the Nervii;—
Look! in this place ran Cassius' dagger through:
See! what a rent the envious Casca made:
Through this the well-beloved Brutus stabb'd;
And, as he pluck'd his cursed steel away,
Mark how the blood of Cæsar follow'd it,
As rushing out of doors, to be resolved
If Brutus so unkindly knock'd, or no;
For Brutus, as you know, was Cæsar's angel:
Judge, O ye gods, how dearly Cæsar loved him!
This was the most unkindest cut of all:
For, when the noble Cæsar saw him stab,
Ingratitude, more strong than traitors' arms,
Quite vanquish'd him: then burst his mighty heart;
And, in his mantle muffling up his face,
Even at the base of Pompey's statue,
Which all the while ran blood, great Cæsar fell.
Oh, what a fall was there, my countrymen!
Then I, and you, and all of us fell down,
While bloody treason flourish'd over us.
Oh! now you weep; and, I perceive, you feel
The dint of pity: these are gracious drops.
Kind souls, what, weep you, when you but behold
Our Cæsar's vesture wounded? Look you here,
Here is himself, marr'd, as you see, by traitors.
1*st Cit.* Oh piteous spectacle!
2*d Cit.* We will be revenged: revenge; about—seek—burn—fire—kill—slay!—let not a traitor live.
Ant. Good friends, sweet friends, let me not stir you up
To such a sudden flood of mutiny.
They that have done this deed are honorable:
What private griefs they have, alas! I know not,
That made them do it; they are wise and honorable,
And will, no doubt, with reasons answer you.
I come not, friends, to steal away your hearts;
I am no orator, as Brutus is:
But, as ye know me all, a plain, blunt man,
That loved my friend, and that they know full well
That gave me public leave to speak of him.
For I have neither wit, nor words, nor worth,

Action, nor utterance, nor the power of speech,
To stir men's blood: I only speak right on:
I tell you that which you yourselves do know;
Show you sweet Cæsar's wounds, poor, poor dumb mouths,
And bid them speak for me. But were I Brutus,
And Brutus Antony, there were an Antony
Would ruffle up your spirits, and put a tongue
In every wound of Cæsar that should move
The stones of Rome to rise and mutiny.

—SHAKESPEARE.

TRIAL SCENE FROM THE "MERCHANT OF VENICE."

Duke. Give me your hand. Come you from old Bellario?
Portia. I did, my lord.
Duke. You are welcome: take your place.
Are you acquainted with the difference
That holds this present question in the court?
Por. I am informed thoroughly of the cause.
Which is the merchant here, and which the Jew?
Duke. Antonio and old Shylock, both stand forth.
Por. Is thy name Shylock?
Shylock. Shylock is my name.
Por. Of a strange nature is the suit you follow;
Yet in such rule that the Venetian law
Cannot impugn you as you do proceed.
You stand within his danger, do you not?
Antonio. Ay, so he says.
Por. Do you confess the bond?
Ant. I do.
Por. Then must the Jew be merciful.
Shy. On what compulsion must I? tell me that.
Por. The quality of mercy is not strain'd;
It droppeth as the gentle rain from heaven
Upon the place beneath; it is twice bless'd;
It blesseth him that gives and him that takes.
'Tis mightiest in the mightiest. It becomes
The throned monarch better than his crown:
His sceptre shows the force of temporal power,
The attribute to awe and majesty,
Wherein doth sit the dread and fear of kings.
But mercy is above this sceptred sway;
It is enthroned in the hearts of kings;
It is an attribute to God himself;
And earthly power doth then show likest God's
When mercy seasons justice. Therefore, Jew,

Though justice be thy plea, consider this—
That, in the course of justice, none of us
Should see salvation: we do pray for mercy:
And that same prayer doth teach us all to render
The deeds of mercy. I have spoke thus much
To mitigate the justice of thy plea,
Which if thou follow, this strict court of Venice
Must needs give sentence 'gainst the merchant there.

Shy. My deeds upon my head! I crave the law,
The penalty and forfeit of my bond.

Por. Is he not able to discharge the money?

Bassanio. Yes, here I tender it for him in the court;
Yea, twice the sum. If that will not suffice,
I will be bound to pay it ten times o'er,
On forfeit of my hands, my head, my heart.
If this will not suffice, it must appear
That malice bears down truth. And I beseech you,
Wrest once the law to your authority:
To do a great right, do a little wrong,
And curb this cruel devil of his will.

Por. It must not be: there is no power in Venice
Can alter a decree establish'd;
'Twill be recorded for a precedent,
And many an error, by the same example,
Will rush into the state: it cannot be.

Shy. A Daniel come to judgment! Yea, a Daniel!
O wise young judge, how I do honor thee!

Por. I pray you, let me look upon the bond.

Shy. Here 'tis, most reverend doctor, here it is.

Por. Shylock, there's thrice thy money offer'd thee.

Shy. An oath—an oath; I have an oath in heaven.
Shall I lay perjury upon my soul?
No, not for Venice.

Por. Why, this bond is forfeit;
And lawfully by this the Jew may claim
A pound of flesh, to be by him cut off
Nearest the merchant's heart. Be merciful;
Take thrice thy money; bid me tear the bond.

Shy. When it is paid according to the tenor.
It doth appear, you are a worthy judge.
You know the law; your exposition
Hath been most sound. I charge thee by the law,
Whereof you are a well-deserving pillar,
Proceed to judgment: by my soul I swear
There is no power in the tongue of man
To alter me. I stay here on my bond.

Ant. Most heartily do I beseech the court
To give the judgment.

Por. Why, then, thus it is :
You must prepare your bosom for his knife.
Shy. O noble judge ! O excellent young man !
Por. For the intent and purpose of the law
Hath full relation to the penalty,
Which here appeareth due upon the bond.
Shy. 'Tis very true : O wise and upright judge !
How much more elder art thou than thy looks !
Por. Therefore lay bare thy bosom.
Shy. Ay, his breast ;
So says the bond—doth it not, noble judge ?
"Nearest his heart ;" those are the very words.
Por. It is so. Are there balance here to weigh
The flesh ?
Shy. I have them ready.
Por. Have by some surgeon, Shylock, on your charge,
To stop his wounds, lest he do bleed to death.
Shy. Is it so nominated in the bond ?
Por. It is not so express'd ; but what of that ?
'Twere good you do so much for charity.
Shy. I cannot find it ; 'tis not in the bond.
Por. You, merchant, have you anything to say ?
Ant. But little ; I am arm'd, and well prepared.
Give me your hand, Bassanio ! fare you well !
Grieve not that I am fallen to this for you ;
For herein Fortune shows herself more kind
Than is her custom : it is still her use
To let the wretched man outlive his wealth ;
To view with hollow eye and wrinkled brow
An age of poverty ; from which lingering penance
Of such misery doth she cut me off.
Commend me to your honorable wife :
Tell her the process of Antonio's end ;
Say how I loved you ; speak me fair in death ;
And, when the tale is told, bid her be judge,
Whether Bassanio had not once a love.
Repent not you that you shall lose a friend ;
And he repents not that he pays your debt ;
For if the Jew do cut but deep enough,
I'll pay it presently with all my heart.
Por. A pound of that same merchant's flesh is thine ;
The court awards it, and the law doth give it.
Shy. Most rightful judge !
Por. And you must cut this flesh from off his breast ;
The law allows it, and the court awards it.
Shy. Most learned judge ! A sentence ! come, prepare !
Por. Tarry a little ; there is something else.
This bond doth give thee here no jot of blood ;

The words expressly are, "a pound of flesh."
Take then thy bond—take thou the pound of flesh;
But, in the cutting it, if thou dost shed
One drop of Christian blood, thy lands and goods
Are, by the laws of Venice, confiscate
Unto the state of Venice.
Gratiano. O upright judge! Mark, Jew!—O learned judge!
Shy. Is that the law?
Por. Thyself shalt see the act:
For as thou urgest justice, be assured
Thou shalt have justice, more than thou desirest.
Gra. O learned judge! Mark, Jew!—a learned judge!
Shy. I take this offer, then; pay the bond thrice,
And let the Christian go.
Bas. Here is the money.
Por. Soft!
The Jew shall have all justice—soft!—no haste;
He shall have nothing but the penalty.
Gra. O Jew! an upright judge! a learned judge!
Por. Therefore prepare thee to cut off the flesh.
Shed thou no blood; nor cut thou less nor more
But just a pound of flesh. If thou cutt'st more
Or less than just a pound—be it but so much
As makes it light or heavy in the substance,
Or the division of the twentieth part
Of one poor scruple—nay, if the scale do turn
But in the estimation of a hair—
Thou diest, and all thy goods are confiscate.
Gra. A second Daniel—a Daniel, Jew!
Now, infidel, I have thee on the hip.
Por. Why doth the Jew pause? take thy forfeiture.
Shy. Give me my principal, and let me go.
Bas. I have it ready for thee; here it is.
Por. He hath refused it in the open court;
He shall have merely justice and his bond.
Gra. A Daniel, still say I—a second Daniel!
I thank thee, Jew, for teaching me that word.
Shy. Shall I not have barely my principal?
Por. Thou shalt have nothing but the forfeiture,
To be so taken at thy peril, Jew.
Shy. Why, then the devil give him good of it!
I'll stay no longer question.
Por. Tarry, Jew;
The law hath yet another hold on you.
It is enacted in the laws of Venice,
If it be proved against an alien,
That by direct or indirect attempts
He seek the life of any citizen,

The party 'gainst the which he doth contrive
Shall seize one half his goods; the other half
Comes to the privy coffer of the state;
And the offender's life lies in the mercy
Of the duke only, 'gainst all other voice.
In which predicament, I say, thou standest;
For it appears, by manifest proceeding,
That indirectly, and directly too,
Thou hast contrived against the very life
Of the defendant; and thou hast incurr'd
The danger formerly by me rehearsed.
Down, therefore, and beg mercy of the duke.

Gra. Beg, that thou mayst have leave to hang thyself;
And yet, thy wealth being forfeit to the state,
Thou hast not left the value of a cord;
Therefore, thou must be hang'd at the state's charge.

Duke. That thou shalt see the difference of our spirits,
I pardon thee thy life before thou ask it.
For half thy wealth, it is Antonio's;
The other half comes to the general state. —SHAKESPEARE.

FROM "KING RICHARD II."

Richard's Despair.—Act III. Sc. 2.

K. Rich. Of comfort no man speak;
Let 's talk of graves, of worms, and epitaphs;
Make dust our paper, and with rainy eyes
Write sorrow on the bosom of the earth.
Let 's choose executors, and talk of wills:
And yet not so,—for what can we bequeath,
Save our deposed bodies to the ground?
Our lands, our lives, and all, are Bolingbroke's,
And nothing can we call our own but death
And that small model of the barren earth
Which serves as paste and cover to our bones.
For Heaven's sake, let us sit upon the ground,
And tell sad stories of the death of kings:—
How some have been deposed, some slain in war,
Some haunted by the ghosts they have deposed:
Some poison'd by their wives, some sleeping kill'd;
All murder'd: for within the hollow crown
That rounds the mortal temples of a king
Keeps Death his court; and there the antic sits,
Scoffing his state, and grinning at his pomp,—
Allowing him a breath, a little scene
To monarchize, be fear'd, and kill with looks;

Infusing him with self and vain conceit,—
As if this flesh which walls about our life
Were brass impregnable,—and, humor'd thus,
Comes at the last, and with a little pin
Bores through his castle wall, and—farewell king!
Cover your heads, and mock not flesh and blood
With solemn reverence; throw away respect,
Tradition, form, and ceremonious duty,
For you have but mistook me all this while:
I live with bread like you, feel want,
Taste grief, need friends: subjected thus,
How can you say to me—I am a king?

—SHAKESPEARE.

FROM "KING RICHARD III."

Clarence's Dream.—Act I. Sc. 4.

CLARENCE *and* BRAKENBURY.

Brak. Why looks your grace so heavily to-day?
Clar. Oh, I have pass'd a miserable night,
So full of fearful dreams, of ugly sights,
That, as I am a Christian faithful man,
I would not spend another such a night,
Though 'twere to buy a world of happy days,
So full of dismal terror was the time.
Brak. What was your dream, my lord? I pray you, tell me.
Clar. Methought that I had broken from the Tower,
And was embark'd to cross to Burgundy;
And in my company my brother Glo'ster:
Who from my cabin tempted me to walk
Upon the hatches; thence we look'd toward England,
And cited up a thousand heavy times,
During the wars of York and Lancaster
That had befallen us. As we paced along
Upon the giddy footing of the hatches,
Methought that Glo'ster stumbled; and, in falling,
Struck me, that thought to stay him, overboard,
Into the tumbling billows of the main.
O Lord! methought, what pain it was to drown!
What dreadful noise of waters in mine ears!
What ugly sights of death within mine eyes!
Methought I saw a thousand fearful wrecks;
Ten thousand men that fishes gnaw'd upon;
Wedges of gold, great anchors, heaps of pearl,
Inestimable stones, unvalued jewels,
All scatter'd in the bottom of the sea.

Some lay in dead men's skulls; and in those holes
Where eyes did once inhabit, there were crept,
As 'twere in scorn of eyes, reflecting gems,
That woo'd the slimy bottom of the deep,
And mock'd the dead bones that lay scatter'd by.
Brak. Had you such leisure in the time of death
To gaze upon the secrets of the deep?
Clar. Methought I had; and often did I strive
To yield the ghost: but still the envious flood
Kept in my soul, and would not let it forth
To find the empty, vast, and wandering air:
But smother'd it within my panting bulk,
Which almost burst to belch it in the sea.
Brak. Awaked you not in this sore agony?
Clar. No, no, my dream was lengthen'd after life:
Oh, then began the tempest to my soul!
I pass'd, methought, the melancholy flood
With that grim ferryman which poets write of,
Unto the kingdom of perpetual night.
The first that there did greet my stranger soul
Was my great father-in-law, renowned Warwick;
Who cried aloud,—"What scourge for perjury
Can this dark monarchy afford false Clarence?"
And so he vanish'd: then came wandering by
A shadow like an angel, with bright hair
Dabbled in blood; and he shriek'd out aloud,—
"Clarence is come,—false, fleeting, perjured Clarence,—
That stabb'd me in the field by Tewksbury;—
Seize on him, Furies, take him unto torment!"—
With that, methought, a legion of foul fiends
Environ'd me, and howled in mine ears
Such hideous cries, that, with the very noise
I trembling waked, and for a season after
Could not believe but that I was in hell,
Such terrible impression made my dream.
Brak. No marvel, my lord, though it affrighted you;
I am afraid, methinks, to hear you tell it.
Clar. O Brakenbury, I have done those things
That now give evidence against the soul,
For Edward's sake; and see how he requites me!
O God! if my deep prayers cannot appease Thee,
But Thou wilt be avenged on my misdeeds,
Yet execute Thy wrath on me alone:
Oh, spare my guiltless wife and my poor children!
I pray thee, gentle keeper, stay by me;
My soul is heavy, and I fain would sleep.

—SHAKESPEARE.

FROM "KING HENRY VIII."

WOLSEY *and* CROMWELL.—Act III. Sc. 2.

Wol. Farewell, a long farewell to all my greatness!
This is the state of man: To-day he puts forth
The tender leaves of hope, to-morrow blossoms,
And bears his blushing honors thick upon him.
The third day comes a frost, a killing frost;
And, when he thinks, good easy man, full surely
His greatness is a ripening, nips his root,
And then he falls, as I do. I have ventured,
Like little wanton boys that swim on bladders,
This many summers in a sea of glory,
But far beyond my depth: my high-blown pride
At length broke under me, and now has left me,
Weary and old with service, to the mercy
Of a rude stream, that must for ever hide me.
Vain pomp and glory of this world, I hate ye;
I feel my heart new open'd. Oh, how wretched
Is that poor man that hangs on princes' favors!
There is, betwixt that smile we would aspire to,
That sweet aspect of princes, and their ruin,
More pangs and fears than wars or women have;
And when he falls, he falls like Lucifer,
Never to hope again.

Enter CROMWELL, *and stands amazed.*

Why, how now, Cromwell?

Crom. I have no power to speak, sir.

Wol. What! amazed
At my misfortunes? can thy spirit wonder
A great man should decline? Nay, an you weep,
I am fallen indeed.

Crom. How does your grace?

Wol. Why, well;
Never so truly happy, my good Cromwell.
I know myself now; and I feel within me
A peace above all earthly dignities,
A still and quiet conscience. The king has cured me,
I humbly thank his grace; and from these shoulders,
These ruin'd pillars, out of pity, taken
A load would sink a navy, too much honor:
Oh, 'tis a burden, Cromwell, 'tis a burden
Too heavy for a man that hopes for heaven.

. . . . . .

Cromwell, I did not think to shed a tear
In all my miseries; but thou hast forced me,
Out of thy honest truth, to play the woman.

Let 's dry our eyes: and thus far hear me, Cromwell;
And, when I am forgotten, as I shall be,
And sleep in dull cold marble, where no mention
Of me more must be heard of, say, I taught thee;
Say, Wolsey, that once trod the ways of glory,
And sounded all the depths and shoals of honor,
Found thee a way, out of his wreck, to rise in;
A sure and safe one, though thy master miss'd it.
Mark but my fall, and that that ruin'd me.
Cromwell, I charge thee, fling away ambition;
By that sin fell the angels; how can man then,
The image of his Maker, hope to win by it?
Love thyself last: cherish those hearts that hate thee;
Corruption wins not more than honesty.
Still in thy right hand carry gentle peace,
To silence envious tongues. Be just, and fear not;
Let all the ends thou aim'st at be thy country's,
Thy God's, and truth's; then if thou fall'st, O Cromwell,
Thou fall'st a blessed martyr! Serve the king;
And, prithee, lead me in:
There, take an inventory of all I have,
To the last penny; 'tis the king's: my robe,
And my integrity to Heaven, is all
I dare now call my own. O Cromwell, Cromwell!
Had I but served my God with half the zeal
I served my king, He would not in mine age
Have left me naked to mine enemies. —SHAKESPEARE.

HAMLET'S SOLILOQUY ON DEATH.

Act III., Sc. 1.

Ham. To be, or not to be: that is the question:
Whether 'tis nobler in the mind to suffer
The stings and arrows of outrageous fortune,
Or to take arms against a sea of troubles,
And by opposing end them? To die,—to sleep,—
No more; and by a sleep to say we end
The heartache, and the thousand natural shocks
That flesh is heir to,—'tis a consummation
Devoutly to be wish'd. To die, to sleep;
To sleep! perchance to dream;—ay, there 's the rub;
For in that sleep of death what dreams may come
When we have shuffled off this mortal coil,
Must give us pause: there 's the respect,
That makes calamity of so long life:
For who would bear the whips and scorns of time,
The oppressor's wrong, the proud man's contumely,

The pangs of despised love, the law's delay,
The insolence of office, and the spurns
That patient merit of the unworthy takes,
When he himself might his quietus make
With a bare bodkin? who would fardels bear,
To grunt and sweat under a weary life,
But that the dread of something after death,
The undiscover'd country from whose bourn
No traveller returns, puzzles the will;
And makes us rather bear those ills we have
Than fly to others that we know not of?
Thus conscience does make cowards of us all;
And thus the native hue of resolution
Is sicklied o'er with the pale cast of thought;
And enterprises of great pith and moment,
With this regard, their currents turn awry,
And lose the name of action. —SHAKESPEARE.

FROM "THE CRITIC."

DANGLE, SNEER, Sir FRETFUL PLAGIARY.

Dan. Ah, my dear friend! we were just speaking of your tragedy. Admirable, Sir Fretful! admirable!

Sneer. You never did anything beyond it, Sir Fretful; never in your life.

Sir F. Sincerely, then, you do like the piece?

Sneer. Wonderfully!

Sir F. But come, now, there must be something that you think might be mended, eh? Mr Dangle, has nothing struck you?

Dan. Why, faith, it is but an ungracious thing for the most part to——

Sir F. With most authors it is just so, indeed; they are in general strangely tenacious; but for my part I am never so well pleased as when a judicious critic points out any defect to me; for what is the purpose of showing a work to a friend if you don't mean to profit by his opinion?

Sneer. Very true. Why, then, though I seriously admire the piece upon the whole, yet there's one small objection, which, if you'll give me leave, I'll mention.

Sir F. Sir, you can't oblige me more.

Sneer. I think it wants incident.

Sir F. You surprise me! Wants incident!

Sneer. Yes; I own I think the incidents are too few.

Sir F. Believe me, Mr Sneer, there is no person for whose judgment I have a more implicit deference; but I protest to you, Mr Sneer, I am only apprehensive that the incidents are too crowded. My dear Dangle, how does it strike you?

Dan. Really, I can't agree with my friend Sneer. I think the plot quite sufficient, and the first four acts by many degrees the best I ever read or saw in my life. If I might venture to suggest anything, it is that the interest rather falls off in the fifth.

Sir F. Rises, I believe you mean, sir——

Dan. No; I don't, upon my word.

Sir F. Yes, yes, you do, upon my soul; it certainly don't fall off, I assure you; no, no, it don't fall off.

Dan. Well, Sir Fretful, I wish you may be able to get rid as easily of the newspaper criticisms as you do of ours!

Sir F. The newspapers! Sir, they are the most villanous, licentious, abominable, infernal—— Not that I ever read them; no, I make it a rule never to look into a newspaper.

Dan. You are quite right, for it certainly must hurt an author of delicate feelings to see the liberties they take.

Sir F. No; quite the contrary. Their abuse is, in fact, the best panegyric; I like it of all things. An author's reputation is only in danger from their support.

Sneer. Why, that's true; and that attack, now, on you the other day——

Sir F. What? Where?

Dan. Ay! you mean in the paper of Thursday. It was completely ill-natured, to be sure.

Sir F. Oh! so much the better. Ha! ha! ha! I wouldn't have it otherwise.

Dan. Certainly it is only to be laughed at, for——

Sir F. You don't happen to recollect what the fellow said, do you?

Sneer. Pray, Dangle, Sir Fretful seems a little anxious——

Sir F. Oh Lud! no! Anxious! not I; not the least. I—— But one may as well hear, you know.

Dan. Sneer, do *you* recollect? [*Aside to* SNEER.] Make out something.

Sneer. [*Aside to* DANGLE.] I will. [*Aloud.*] Yes, yes, I remember perfectly.

Sir F. Well, and pray, now—not that it signifies—what might the gentleman say?

Sneer. Why, he roundly asserts that you have not the slightest invention or original genius whatever, though you are the greatest traducer of all other authors living.

Sir F. Ha! ha! ha! Very good!

Sneer. That, as to comedy, you have not one idea of your own, he believes, even in your commonplace book, where stray jokes and pilfered witticisms are kept with as much method as the ledger of the Lost and Stolen Office.

Sir F. Ha! ha! ha! Very pleasant.

Sneer. Nay, that you are so unlucky as not to have the skill even to steal with taste, but that you glean from the refuse of obscure volumes, where more judicious plagiarists have been before you; so that the body

of your work is a composition of dregs and sediments, like a bad tavern's worst wine.

Sir F. Ha! ha!

Sneer. In your more serious efforts, he says, your bombast would be less intolerable if the thoughts were ever suited to the expressions; but the homeliness of the sentiment stares through the fantastic encumbrance of its fine language like a clown in one of the new uniforms.

Sir F. Ha! ha!

Sneer. That your occasional tropes and flowers suit the general coarseness of your style, as tambour sprigs would a ground of linsey-woolsey; while your imitations of Shakespeare resemble the mimicry of Falstaff's page, and are about as near the standard of the original.

Sir F. Ha!——

Sneer. In short, that even the finest passages you steal are of no service to you, for the poverty of your own language prevents their assimilating, so that they lie on the surface like lumps of marl on a barren moor, encumbering what it is not in their power to fertilize.

Sir F. [*After great agitation.*] Now, another person would be vexed at this.

Sneer. Oh, but I wouldn't have told you, only to divert you.

Sir F. I know it. I *am* diverted. Ha! ha! ha! not the least invention! Ha! ha! ha!—very good, very good!

Sneer. Yes; no genius! Ha! ha! ha!

Dan. A severe rogue; ha! ha! ha! But you are quite right, Sir Fretful, never to read such nonsense.

Sir F. To be sure; for if there is anything to one's praise, it is a foolish vanity to be gratified at it; and if it is abuse, why, one is always sure to hear of it from some good-natured friend or other! —SHERIDAN.

SCENE OF THE FRENCH REVOLUTION.

A Prison in the Palace of the Luxembourg.

D'AUBIGNE, *an aged Royalist, and* BLANCHE, *his daughter.*

Blanche. What was our doom, my father? In thine arms
I lay unconsciously through that dread hour.
Tell me the sentence. Could our judges look,
Without relenting, on thy silvery hair?
Was there not mercy, father? Will they not
Restore us to our home?

D'Aubigne. Yes, my poor child!
They send us home!

Blanche. Oh! shall we gaze again
On the bright Loire? Will the old hamlet spire,
And the gray turret of our own chateau,
Look forth to greet us through the dusky elms?
Will the kind voices of our villagers,

The loving laughter in their children's eyes,
Welcome us back at last? But how is this?
Father! thy glance is clouded; on thy brow
There sits no joy!

D'Aubigne. Upon my brow, dear girl,
There sits, I trust, such deep and solemn peace
As may befit the Christian who receives
And recognizes, in submissive awe,
The summons of his God.

Blanche. Thou dost not mean,—
No, no! it cannot be! Didst thou not say
They sent us *home?*

D'Aubigne. Where is the spirit's home?
Oh! most of all in these dark, evil days,
Where should it be, but in that world serene,
Beyond the sword's reach and the tempest's power?
Where, but in heaven?

Blanche. My father!

D'Aubigne. We must die!
We must look up to God, and calmly die.
Come to my heart, and weep there! For a while
Give nature's passion way, then brightly rise
In the still courage of a woman's heart.
Do I not know thee? Do I ask too much
From mine own noble Blanche?

Blanche. Oh! clasp me fast!
Thy trembling child! Hide, hide me in thine arms!
Father!

D'Aubigne. Alas! my flower, thou'rt young to go;
Young, and so fair! Yet were it worse, methinks,
To leave thee where the gentle and the brave,
And they that loved their God, have all been swept,
Like the sear leaves away. The soil is steep'd
In noble blood, the temples are gone down;
The voice of prayer is hush'd, or fearfully
Mutter'd, like sounds of guilt. Why, who would live?
Who hath not panted, as a dove, to flee,
To quit for ever the dishonor'd soil,
The burden'd air? Our God upon the cross,
Our king upon the scaffold; let us think
Of these, and fold endurance to our hearts,
And bravely die!

Blanche. A dark and fearful way!
An evil doom for thy dear, honor'd head!
Oh! thou the kind and gracious! whom all eyes
Bless'd as they look'd upon! Speak yet again!
Say, will they part us?

D'Aubigne. No, my Blanche; in death

We shall not be divided.
Blanche. Thanks to God!
He, by thy glance, will aid me. I shall see
His light before me to the last. And when,—
Oh! pardon these weak shrinkings of thy child!—
When shall the hour befall?
D'Aubigne. Oh! swiftly now,
And suddenly, with brief dread interval,
Comes down the mortal stroke. But of that hour,
As yet, I know not. Each low, throbbing pulse
Of the quick pendulum may usher in
Eternity.
Blanche. My father! lay thy hand
On thy poor Blanche's head, and once again
Bless her with thy deep voice of tenderness,
Thus breathing saintly courage through her soul
Ere we are call'd.
D'Aubigne. If I may speak through tears,
Well may I bless thee, fondly, fervently,
Child of my heart!—thou who dost look on me
With thy lost mother's angel eyes of love!
Thou that hast been a brightness in my path,
A guest of heaven unto my lowly soul,
A stainless lily in my widow'd house,
There springing up, with soft light round thee shed,
For immortality! Meek child of God!
I bless thee! He will bless thee! In His love
He calls thee now from this rude, stormy world,
To thy Redeemer's breast. And thou wilt die,
As thou hast lived, my duteous, holy Blanche,
In trusting and serene submissiveness,
Humble, yet full of Heaven.
Blanche. Now is there strength
Infused through all my spirit. I can rise
And say,—"Thy will be done!"
D'Aubigne. Seest thou, my child,
Yon faint line in the west? The signal star
Of our due evening service, gleaming in
Through the close dungeon grating? Mournfully
It seems to quiver; yet shall this night pass,
This night alone, without the lifted voice
Of adoration in our narrow cell,
As if unworthy fear, or wavering faith,
Silenced the strain? No! let it waft to heaven
The prayer, the hope of poor mortality,
In its dark hour once more! And we will sleep,
Yes calmly sleep, when our last rite is closed.

—Felicia Hemans.

THE SWISS PATRIOT.

WILLIAM TELL, ALBERT, *and* GESLER.

Gesler. What is thy name?
Tell. My name?
It matters not to keep it from thee now:—
My name is Tell.
Ges. Tell!—William Tell?
Tell. The same.
Ges. What! he so famed 'bove all his countrymen
For guiding o'er the stormy lake the boat?
And such a master of his bow, 'tis said
His arrows never miss!—Indeed!—I'll take
Exquisite vengeance!—Mark! I'll spare thy life—
Thy boy's too—both of you are free—on one
Condition.
Tell. Name it.
Ges. I would see you make
A trial of your skill with that same bow
You shoot so well with.
Tell. Name the trial you
Would have me make.
Ges. You look upon your boy
As though instinctively you guess'd it.
Tell. Look upon my boy! What mean you? Look upon
My boy as though I guess'd it!—Guess'd the trial
You'd have me make!—Guess'd it
Instinctively! You do not mean—no—no—
You would not have me make a trial of
My skill upon my child!—Impossible!
I do not guess your meaning.
Ges. I would see
Thee hit an apple at the distance of
A hundred paces.
Tell. Is my boy to hold it?
Ges. No.
Tell. No!—I'll send the arrow through the core!
Ges. It is to rest upon his head.
Tell. Great Heaven, you hear him!
Ges. Thou dost hear the choice I give—
Such trial of the skill thou art master of,
Or death to both of you; not otherwise
To be escaped.
Tell. O monster!
Ges. Wilt thou do it?
Albert. He will! he will!

Tell. Ferocious monster !—Make
A father murder his own child !
Ges. Take off
His chains, if he consent.
Tell. With his own hand !
Ges. Does he consent ?
Alb. He does. [GESLER *signs to his officers, who proceed to take off* TELL'S *chains.* TELL *all the time unconscious what they do.*
Tell. With his own hand !
Murder his child with his own hand—This hand !
The hand I 've led him, when an infant, by !—
'Tis beyond horror—'tis most horrible.
Amazement ! [*His chains fall off.*] What 's that you 've done to me.
Villains ! put on my chains again. My hands
Are free from blood, and have no gust for it,
That they should drink my child's ! Here ! here ! I 'll not
Murder my boy for Gesler.
Alb. Father—father !
You will not hit me, father !——
Tell. Hit thee !—Send
The arrow through thy brain—or, missing that,
Shoot out an eye—or, if thine eye escape,
Mangle the cheek I 've seen thy mother's lips
Cover with kisses !—Hit thee—hit a hair
Of thee, and cleave thy mother's heart——
Ges. Dost thou consent ?
Tell. Give me my bow and quiver.
Ges. For what ?
Tell. To shoot my boy !
Alb. No, father—no !
To save me !—you 'll be sure to hit the apple—
Will you not save me, father ?
Tell. Lead me forth—
I 'll make the trial !
Alb. Thank you !
Tell. Thank me ! Do
You know for what ?—I will not make the trial,
To take him to his mother in my arms,
And lay him down a corpse before her !
Ges. Then he dies this moment—and you certainly
Do murder him whose life you have a chance
To save, and will not use it.
Tell. Well—I 'll do it : I 'll make the trial.
Alb. Father——
Tell. Speak not to me :
Let me not hear thy voice—Thou must be dumb ;
And so should all things be—Earth should be dumb,
And Heaven—unless its thunders mutter'd at

The deed, and sent a bolt to stop it! Give me
My bow and quiver!——
Ges. When all's ready.
Tell. Well! Lead on!
Enter, slowly, people in evident distress—Officers, SARNEM, GESLER, TELL, ALBERT, *and Soldiers—one bearing* TELL'S *bow and quiver, another with a basket of apples.*
Ges. That is your ground. Now shall they measure thence
A hundred paces. Take the distance.
Tell. Is the line a true one?
Ges. True or not, what is 't to thee?
Tell. What is 't to me? A little thing,
A very little thing—a yard or two
Is nothing here or there—were it a wolf
I shot at! Never mind.
Ges. Be thankful, slave,
Our grace accords thee life on any terms.
Tell. I will be thankful, Gesler!—Villain, stop!
You measure to the sun.
Ges. And what of that?
What matter whether to or from the sun?
Tell. I 'd have it at my back—the sun should shine
Upon the mark, and not on him that shoots.
I cannot see to shoot against the sun—
I will not shoot against the sun!
Ges. Give him his way! Thou hast cause to bless my mercy.
Tell. I shall remember it. I 'd like to see
The apple I 'm to shoot at.
Ges. Stay! show me the basket!—there——
Tell. You 've picked the smallest one.
Ges. I know I have.
Tell. Oh! do you?—But you see
The color on 't is dark—I 'd have it light,
To see it better.
Ges. Take it as it is:
Thy skill will be the greater if thou hitt'st it.
Tell. True—true!—I did not think of that—I wonder
I did not think of that—Give me some chance
To save my boy! [*Throws away the apple with all his force.*
I will not murder him,
If I can help it—for the honor of
The form thou wearest, if all thy heart is gone.
Ges. Well, choose thyself.
Tell. Have I a friend among the lookers-on?
Verner. [*Rushing forward.*] Here, Tell.
Tell. I thank thee, Verner!
He is a friend runs out into a storm
To shake a hand with us. I must be brief:

When once the bow is bent, we cannot take
The shot too soon. Verner, whatever be
The issue of this hour, the common cause
Must not stand still. Let not to-morrow's sun
Set on the tyrant's banner! Verner! Verner!
The boy!—the boy! Thinkest thou he hath the courage
To stand it?

Ver. Yes.

Tell. Does he tremble?

Ver. No.

Tell. Art sure?

Ver. I am.

Tell. How looks he?

Ver. Clear and smilingly:
If you doubt it—look yourself.

Tell. No—no—my friend;
To hear it is enough.

Ver. He bears himself so much above his years——

Tell. I know!—I know.

Ver. With constancy so modest!——

Tell. I was sure he would——

Ver. And looks with such relying love
And reverence upon you——

Tell. Man! Man! Man!
No more! Already I'm too much the father
To act the man!—Verner, no more, my friend!
I would be flint—flint—flint. Don't make me feel
I'm not—do not mind me!—Take the boy
And set him, Verner, with his back to me.
Set him upon his knees—and place this apple
Upon his head, so that the stem may front me,—
Thus, Verner; charge him to keep steady—tell him
I'll hit the apple!—Verner, do all this
More briefly than I tell it thee.

Ver. Come, Albert! [*Leading him out.*

Alb. May I not speak with him before I go?

Ver. No.

Alb. I would only kiss his hand.

Ver. You must not.

Alb. I must!—I cannot go from him without.

Ver. It is his will you should.

Alb. His will, is it?
I am content then—come.

Tell. My boy! [*Holding out his arms to him.*

Alb. My father! [*Rushing into* TELL'S *arms.*

Tell. If thou canst bear it, should not I?—Go, now,
My son—and keep in mind that I can shoot—
Go, boy—be thou but steady, I will hit

The apple—Go !—God bless thee—go.—My bow !—
[*The bow is handed to him.*
Thou wilt not fail thy master, wilt thou ?—Thou
Hast never fail'd him yet, old servant—No,
I 'm sure of thee—I know thy honesty.
Thou art stanch—stanch.—Let me see my quiver.
Ges. Give him a single arrow.
Tell. Do you shoot ?
Sol. I do.
Tell. Is it so you pick an arrow, friend ?
The point, you see, is bent ; the feather jagged : [*Breaks it.*
That 's all the use 'tis fit for.
Ges. Let him have another.
Tell. Why, 'tis better than the first,
But yet not good enough for such an aim
As I 'm to take—'tis heavy in the shaft :
I 'll not shoot with it ! [*Throws it away.*] Let me see my quiver.
Bring it !—'Tis not one arrow in a dozen
I 'd take to shoot with at a dove, much less
A dove like that.
Ges. It matters not.
Show him the quiver.
Tell. See if the boy is ready.
[*Tell here hides an arrow under his vest.*
Ver. He is.
Tell. I 'm ready, too ! Keep silent for
Heaven's sake, and do not stir—and let me have
Your prayers—your prayers—and be my witnesses
That if his life 's in peril from my hand,
'Tis only for the chance of saving it. [*To the people.*
Ges. Go on.
Tell. I will.
O friends, for mercy's sake keep motionless
And silent.
[TELL *shoots—a shout of exultation bursts from the crowd*—TELL'S *head drops on his bosom ; he with difficulty supports himself upon his bow.*
Ver. [*Rushing in with* ALBERT.] The boy is safe—no hair of him is touch'd.
Alb. Father, I 'm safe !—your Albert's safe, dear father,—
Speak to me ! Speak to me !
Ver. He cannot, boy !
Alb. You grant him life ?
Ges. I do.
Alb. And we are free ?
Ges. You are. [*Crossing angrily behind.*
Alb. Thank Heaven !—thank Heaven !

Ver. Open his vest,
And give him air.
[ALBERT *opens his father's vest, and the arrow drops.* TELL *starts, fixes his eye on* ALBERT, *and clasps him to his breast.*
Tell. My boy!—My boy!
Ges. For what
Hid you that arrow in your breast?—Speak, slave!
Tell. To kill thee, tyrant, had I slain my boy?
—SHERIDAN KNOWLES.

RICHELIEU'S VINDICATION.

Richelieu. Room, my lords, room! The minister of France
Can need no intercession with the king.
[*They fall back.*
Louis. What means this false report of death, Lord Cardinal?
Richelieu. Are you anger'd, sire, that I live still?
Louis. No; but such artifice——
Richelieu. Not mine:—look elsewhere!
Louis—my castle swarm'd with the assassins.
Baradas. [*Advancing.*] We have punish'd them already.
Huguet is now
In the Bastile. O my lord, *we* were prompt
To avenge you—*we* were——
Richelieu. WE? Ha! ha! you hear,
My liege! What page, man, in the last court grammar
Made you a plural? Count, you have seized the *hireling:*
Sire, shall I name the *master?*
Louis. Tush! my lord,
The old contrivance:—ever does your wit
Invent assassins,—that ambition may
Slay rivals——
Richelieu. Rivals, sire! in what?
Service to France? *I have none!* Lives the man
Whom Europe, paled before your glory, deems
Rival to Armand Richelieu?
Louis. What! so haughty!
Remember, he who made can unmake.
Richelieu. Never!
Never! Your anger can recall your trust,
Annul my office, spoil me of my lands,
Rifle my coffers,—but my name—my deeds,
Are royal in a land beyond your sceptre!
Pass sentence on me if you will; from kings,
Lo, I appeal to time! Be just, my liege—
I found your kingdom rent with heresies

And bristling with rebellion ; lawless nobles
And breadless serfs ; England fomenting discord ;
Austria—her clutch on your dominion ; Spain
Forging the prodigal gold of either Ind
To armèd thunderbolts. The arts lay dead,
Trade rotted in your marts, your armies mutinous,
Your treasury bankrupt. Would you now revoke
Your trust, so be it! and I leave you, sole,
Supremest monarch of the mightiest realm,
From Ganges to the Icebergs :—Look without ;
No foe not humbled! Look within ; the arts
Quit for your schools their old Hesperides—
The golden Italy! while through the veins
Of your vast empire flows in strengthening tides,
Trade, the calm health of nations!

Sire, I know
Your smoother courtiers please you best—nor measure
Myself with them,—yet sometimes I would doubt
If statesmen, rock'd and dandled into power,
Could leave such legacies to kings!

[Louis *appears irresolute.*

Baradas. [*Passing him, whispers.*] But Julie,
Shall I not summon her to court?

Louis. [*Motions to* Baradas, *and turns haughtily to the* Cardinal.] Enough!
Your eminence must excuse a longer audience.
To your palace :—For our conference, this
Nor place nor season.

Richelieu. Good, my liege! for *Justice*
All place a temple, and all season, summer!
Do you deny me justice? Saints of heaven,
He turns from me! *Do you deny me justice?*
For fifteen years, while in these hands dwelt empire,
The humblest craftsman, the obscurest vassal,
The very leper shrinking from the sun,
Though loathed by Charity, might ask for justice!
Not with the fawning tone and crawling mien
Of some I see around you—counts and princes—
Kneeling for *favors* :—but, erect and loud,
As men who ask man's rights! my liege, my lord,
Do you refuse me justice—audience even—
In the pale presence of the baffled murderer?

Louis. Lord Cardinal—one by one you have sever'd from me
The bonds of human love. All near and dear
Mark'd out for vengeance—exile, or the scaffold.
You find me now amidst my trustiest friends,
My closest kindred ; you would tear them from me ;
They murder *you*, forsooth, since *me* they love.

Enough of plots and treasons for one reign!
Home! home! and sleep away these phantoms!
Richelieu. Sire!
I—— patience, Heaven! sweet Heaven! Sire, from the foot
Of that great throne, these hands have raised aloft
On an Olympus, looking down on mortals
And worshipp'd by their awe—before the foot
Of that high throne—spurn you the gray-hair'd man
Who gave you empire—and now sues for safety!
Louis. No:—when we see your eminence in truth
At the *foot* of the throne—we'll listen to you.

—BULWER.

A SONG FOR ST. CECILIA'S DAY.

I.

FROM harmony, from heavenly harmony,
This universal frame began.
When nature underneath a heap
Of jarring atoms lay,
And could not heave her head,
The tuneful voice was heard from high,
Arise, ye more than dead.
Then cold, and hot, and moist, and dry,
In order to their stations leap,
And music's power obey.
From harmony, from heavenly harmony,
This universal frame began;
From harmony to harmony
Through all the compass of the notes it ran,
The diapason closing full in man.

II.

What passion cannot music raise and quell?
When Jubal struck the chorded shell,
His listening brethren stood around,
And, wondering, on their faces fell
To worship that celestial sound.
Less than a god they thought there could not dwell
Within the hollow of that shell,
That spoke so sweetly and so well.
What passion cannot music raise and quell?

III.

The trumpet's loud clangor
Excites us to arms,
With shrill notes of anger,
And mortal alarms.

The double, double, double beat
Of the thundering drum
Cries, Hark! the foes come;
Charge, charge, 'tis too late to retreat.

IV.

The soft complaining flute,
In dying notes discovers,
The woes of hopeless lovers,
Whose dirge is whisper'd by the warbling lute.

V.

Sharp violins proclaim
Their jealous pangs and desperation,
Fury, frantic indignation,
Depth of pains, and height of passion,
For the fair, disdainful dame.

VI.

But oh! what art can teach,
What human voice can reach,
The sacred organ's praise?
Notes inspiring holy love,
Notes that wing their heavenly ways
To join the choir above.

VII.

Orpheus could lead the savage race;
And trees uprooted left their place,
Sequacious of the lyre;
But bright Cecilia raised the wonder higher:
When to her organ vocal breath was given,
An angel heard, and straight appear'd,
Mistaking earth for heaven.

GRAND CHORUS.

As from the power of sacred lays
The spheres began to move,
And sung the great Creator's praise
To all the bless'd above;
So when the last and dreadful hour
This crumbling pageant shall devour,
The trumpet shall be heard on high,
The dead shall live, the living die,
And music shall untune the sky.

—DRYDEN.

THE BARD.

"Ruin seize thee, ruthless king!
Confusion on thy banners wait!
Though fann'd by Conquest's crimson wing,
They mock the air with idle state.
Helm nor hauberk's twisted mail,
Nor even thy virtues, tyrant! shall avail
To save thy secret soul from nightly fears;
From Cambria's curse, from Cambria's tears!"
Such were the sounds that o'er the crested pride
Of the first Edward scatter'd wild dismay,
As down the steep of Snowdon's shaggy side
He wound with toilsome march his long array.
Stout Glo'ster stood aghast in speechless trance;
"To arms!" cried Mortimer, and couch'd his quivering lance.
On a rock, whose haughty brow
Frowns o'er old Conway's foaming flood,
Robed in the sable garb of woe,
With haggard eyes, the poet stood;
(Loose his beard, and hoary hair
Stream'd like a meteor to the troubled air;)
And, with a master's hand and prophet's fire,
Struck the deep sorrows of his lyre—
"Dear lost companions of my tuneful art!
Dear as the light that visits these sad eyes,
Dear as the ruddy drops that warm my heart,
Ye died amidst your dying country's cries—
No more I weep. They do not sleep;
On yonder cliffs, a grisly band,
I see them sit! They linger yet,
Avengers of their native land;
With me in dreadful harmony they join,
And weave with bloody hand the tissue of thy line.
'Weave the warp, and weave the woof,
The winding-sheet of Edward's race;
Give ample room and verge enough
The characters of hell to trace.
Mark the year, and mark the night,
When Severn shall re-echo with affright
The shrieks of death through Berkeley's roof that ring,
Shrieks of an agonizing king!
Mighty victor, mighty lord,
Low on his funeral couch he lies!
No pitying heart, no eye afford
A tear to grace his obsequies!

Is the sable warrior fled?
Thy son is gone—he rests among the dead.
The swarm that in thy noontide beam were born,
Gone to salute the rising morn.
Fair laughs the morn, and soft the zephyr blows,
While, proudly riding o'er the azure realm,
In gallant trim the gilded vessel goes,
Youth on the prow, and pleasure at the helm;
Regardless of the sweeping whirlwind's sway,
That, hush'd in grim repose, expects his evening prey.'
Fond, impious man! think'st thou yon sanguine cloud,
Raised by thy breath, has quench'd the orb of day?
To-morrow he repairs the golden flood,
And warms the nations with redoubled ray.
Enough for me; with joy I see
The different doom our fates assign.
Be thine despair, and sceptred care,
To triumph and to die are mine."
He spoke, and, headlong from the mountain's height,
Deep in the roaring tide he plunged to endless night.

—Gray.

THE PASSIONS.

When Music, heavenly maid, was young,
While yet in early Greece she sung,
The Passions oft, to hear her shell,
Throng'd around her magic cell,
Exulting, trembling, raging, fainting,
Possest beyond the Muse's painting.
By turns they felt the glowing mind
Disturb'd, delighted, raised, refined:
Till once, 'tis said, when all were fired,
Fill'd with fury, rapt, inspired,
From the supporting myrtles round
They snatch'd her instruments of sound:
And, as they oft had heard apart
Sweet lessons of her forceful art,—
Each—for madness ruled the hour—
Would prove his own expressive power.

First, Fear, his hand, its skill to try,
Amid the chords bewilder'd laid;
And back recoil'd, he knew not why,
Even at the sound himself had made.

Next Anger rush'd, his eyes on fire,
In lightnings own'd his secret stings ;
In one rude clash he struck the lyre,
And swept with hurried hands the strings.

With woful measures, wan Despair—
Low sullen sounds !—his grief beguiled ;
A solemn, strange, and mingled air ;
'Twas sad by fits—by starts 'twas wild.

But thou, O Hope ! with eyes so fair,
What was thy delighted measure !
Still it whisper'd promised pleasure,
And bade the lovely scenes at distance hail.
Still would her touch the strain prolong ;
And, from the rocks, the woods, the vale,
She call'd on Echo still through all the song.
And where her sweetest theme she chose,
A soft responsive voice was heard at every close ;
And Hope, enchanted, smiled, and waved her golden hair.

And longer had she sung—but, with a frown,
Revenge impatient rose.
He threw his blood-stain'd sword in thunder down ;
And, with a withering look,
The war-denouncing trumpet took,
And blew a blast so loud and dread,
Were ne'er prophetic sounds so full of woe ;
And ever and anon he beat
The doubling drum with furious heat ;
And though sometimes, each dreary pause between,
Dejected Pity, at his side,
Her soul-subduing voice applied,
Yet still he kept his wild unalter'd mien ;
While each strain'd ball of sight seem'd bursting from his head.

Thy numbers, Jealousy, to nought were fix'd :
Sad proof of thy distressful state !
Of differing themes the veering song was mix'd :
And, now, it courted Love ; now, raving, called on Hate.

With eyes upraised, as one inspired,
Pale Melancholy sat retired ;
And from her wild sequester'd seat,
In notes by distance made more sweet,
Pour'd through the mellow horn her pensive soul :
And, dashing soft, from rocks around,
Bubbling runnels join'd the sound ;
Through glades and glooms the mingled measure stole :

Or o'er some haunted streams, with fond delay,
Round a holy calm diffusing,
Love of peace and lonely musing—
In hollow murmurs died away.

But, oh, how alter'd was its sprightlier tone!
When Cheerfulness, a nymph of healthiest hue,
Her bow across her shoulder flung,
Her buskins gemm'd with morning dew,
Blew an inspiring air, that dale and thicket rung—
The hunter's call, to Faun and Dryad known.
The oak-crown'd sisters, and their chaste-eyed queen,
Satyrs and sylvan boys were seen,
Peeping from forth their alleys green;
Brown Exercise rejoiced to hear;
And Sport leap'd up, and seized his beechen spear.

Last, came Joy's ecstatic trial.
He, with viny crown advancing,
First to the lively pipe his hand address'd;
But soon he saw the brisk awakening viol,
Whose sweet entrancing voice he loved the best.
They would have thought, who heard the strain,
They saw, in Tempe's vale, her native maids,
Amid the festal-sounding shades,
To some unwearied minstrel dancing;
While, as his flying fingers kiss'd the strings,
Love framed with Mirth a gay fantastic round—
Loose were her tresses seen, her zone unbound;
And he, amid his frolic play,
As if he would the charming air repay,
Shook thousand odors from his dewy wings. —Collins

GINEVRA.

If thou shouldst ever come to Modena,
Stop at a palace near the Reggio Gate
Dwelt in of old by one of the Orsini.
Its noble gardens, terrace above terrace,
And rich in fountains, statues, cypresses,
Will long detain thee; but, before thou go,
Enter the house—prithee, forget it not—
And look a while upon a picture there.

'Tis of a lady in her earliest youth;
She sits inclining forward as to speak,
Her lips half open, and her finger up,
As though she said, "Beware!"—her vest of gold

Broider'd with flowers, and clasp'd from head to foot—
An emerald stone in every golden clasp ;
And on her brow, fairer than alabaster,
A coronet of pearls. But then her face,
So lovely, yet so arch, so full of mirth,
The overflowings of an innocent heart—
It haunts me still, though many a year has fled,
Like some wild melody !—Alone it hangs
Over a mouldering heirloom, its companion,
An oaken chest, half-eaten by the worm.

She was an only child ; from infancy
The joy, the pride, of an indulgent sire.
Her mother, dying of the gift she gave,
That precious gift, what else remain'd to him ?
The young Ginevra was his all in life,
Still as she grew, for ever in his sight.
She was all gentleness, all gaiety,
Her pranks the favorite theme of every tongue.
But now the day was come, the day, the hour;
And in the lustre of her youth she gave
Her hand, with her heart in it, to Francesco.

Great was the joy ; but at the bridal feast,
When all sat down, the bride was wanting there—
Nor was she to be found ! Her father cried,
"'Tis but to make a trial of our love !"—
And fill'd his glass to all ; but his hand shook,
And soon from guest to guest the panic spread.
'Twas but that instant she had left Francesco,
Laughing and looking back, and flying still,
Her ivory tooth imprinted on his finger.
But now, alas ! she was not to be found ;
Nor from that hour could anything be guess'd,
But that she was not ! Weary of his life,
Francesco flew to Venice, and forthwith
Flung it away in battle with the Turk.
Orsini lived ; and long mightst thou have seen
An old man wandering as in quest of something—
Something he could not find—he knew not what.
When he was gone, the house remain'd a while
Silent and tenantless—then went to strangers.

Full fifty years had past, and all forgot,
When on an idle day, a day of search
'Mid the old lumber in the gallery,
That mouldering chest was noticed : and 'twas said
By one as young, as thoughtless as Ginevra,
"Why not remove it from its lurking-place ?"

'Twas done as soon as said; but on the way
It burst—it fell; and lo! a skeleton;
With here and there a pearl, an emerald stone,
A golden clasp, clasping a shred of gold.
All else had perish'd—save a nuptial ring,
And a small seal, her mother's legacy,
Engraven with a name! the name of both—
"GINEVRA."—There then had she found a grave;
Within that chest had she conceal'd herself,
Fluttering with joy, the happiest of the happy!
When a spring-lock, that lay in ambush there,
Fasten'd her down for ever!

—ROGERS.

LOCHIEL'S WARNING.

Wizard. Lochiel! Lochiel! beware of the day
When the Lowlands shall meet thee in battle array!
For a field of the dead rushes red on my sight,
And the clans on Culloden are scatter'd in fight!
They rally!—they bleed!—for their kingdom and crown
Woe, woe to the riders that trample them down!
Proud Cumberland prances, insulting the slain,
And their hoof-beaten bosoms are trod to the plain.
But hark! through the fast-flashing lightning of war,
What steed to the desert flies frantic and far?
'Tis thine, O Glenullin! whose bride shall await,
Like a love-lighted watch-fire all night at the gate.
A steed comes at morning; no rider is there;
But its bridle is red with the sign of despair.
Weep, Albyn! to death and captivity led!
Oh, weep! but thy tears cannot number the dead;
For a merciless sword o'er Culloden shall wave—
Culloden! that reeks with the blood of the brave.

Lochiel. Go, preach to the coward, thou death-telling seer!
Or, if gory Culloden so dreadful appear,
Draw, dotard, around thy old wavering sight,
This mantle, to cover the phantoms of fright!

Wizard. Ha! laugh'st thou, Lochiel, my vision to scorn?
Proud bird of the mountain, thy plume shall be torn!
Say, rush'd the bold eagle exultingly forth
From his home, in the dark-rolling clouds of the north?
Lo! the death-shot of foemen outspeeding, he rode
Companionless, bearing destruction abroad;
But down let him stoop from his havoc on high!
Ah! home let him speed,—for the spoiler is nigh.
Why flames the far summit? Why shoot to the blast
Those embers, like stars from the firmament cast?

'Tis the fire-shower of ruin, all dreadfully driven
From his eyry, that beacons the darkness of heaven.
O crested Lochiel: the peerless in might,
Whose banners arise on the battlement's height,
Heaven's fire is around thee, to blast and to burn;
Return to thy dwelling, all lonely!—return!
For the blackness of ashes shall mark where it stood,
And a wild mother scream o'er her famishing brood.

Lochiel. False Wizard, avaunt! I have marshall'd my clan,
Their swords are a thousand, their bosoms are one!
They are true to the last of their blood and their breath,
And like reapers descend to the harvest of death.
Then welcome be Cumberland's steed to the shock!
Let him dash his proud foam like a wave on the rock!
But woe to his kindred, and woe to his cause,
When Albyn her claymore indignantly draws;
When her bonneted chieftains to victory crowd,
Clanranald the dauntless, and Moray the proud;
All plaided and plumed in their tartan array——

Wizard. Lochiel! Lochiel! beware of the day!
For dark and despairing my sight I may seal.
But man cannot cover what God would reveal;
'Tis the sunset of life gives me mystical lore,
And coming events cast their shadows before.
I tell thee, Culloden's dread echoes shall ring
With the bloodhounds that bark for thy fugitive king.
Lo! anointed by Heaven with vials of wrath,
Behold, where he flies on his desolate path!
Now, in darkness and billows, he sweeps from my sight:
Rise! Rise! ye wild tempests, and cover his flight!
'Tis finish'd! Their thunders are hush'd on the moors;
Culloden is lost, and my country deplores:
But where is the iron-bound prisoner? Where?
For the red eye of battle is shut in despair.
Say, mounts he the ocean-wave, banish'd, forlorn,
Like a limb from his country cast bleeding and torn?
Ah, no! for a darker departure is near;
The war-drum is muffled, and black is the bier;
His death-bell is tolling: oh! mercy, dispel
Yon sight, that it freezes my spirit to tell!
Life flutters, convulsed, in his quivering limbs,
And his blood-streaming nostril in agony swims,
Accursed be the fagots that blaze at his feet,
Where his heart shall be thrown, ere it ceases to beat,
With the smoke of its ashes to poison the gale——

Lochiel. Down, soothless insulter! I trust not the tale:
For never shall Albyn a destiny meet
So black with dishonor, so foul with retreat,

Though my perishing ranks should be strew'd in their gore,
Like ocean weeds heap'd on the surf-beaten shore,
Lochiel, untainted by flight or by chains,
While the kindling of life in his bosom remains,
Shall victor exult, or in death be laid low,
With his back to the field and his feet to the foe!
And, leaving in battle no blot on his name,
Look proudly to heaven from the deathbed of fame.

—CAMPBELL.

FITZ-JAMES AND RODERICK.

(From "The Lady of the Lake.")

THE chief in silence strode before,
And reach'd the torrent's sounding shore.
And here his course the chieftain stay'd,
Threw down his target and his plaid,
And to the lowland warrior said:—
"Bold Saxon! to his promise just,
Vich-Alpine has discharged his trust;
This murderous chief, this ruthless man,
This head of a rebellious clan,
Hath led thee safe, through watch and ward,
Far past Clan-Alpine's outmost guard.
Now, man to man, and steel to steel,
A chieftain's vengeance thou shalt feel.
See, here all vantageless I stand,
Arm'd, like thyself, with single brand;
For this is Coilantogle ford,
And thou must keep thee with thy sword."

The Saxon paused:—"I ne'er delay'd,
When foeman bade me draw my blade;
Nay, more, brave chief, I vow'd thy death;
Yet sure thy fair and generous faith,
And my deep debt for life preserved,
A better meed have well deserved:
Can naught but blood our feud atone?
Are there no means?"—"No, stranger, none!
And here,—to fire thy flagging zeal,—
The Saxon cause rests on thy steel;
For thus spoke Fate, by prophet bred
Between the living and the dead:
'Who spills the foremost foeman's life,
His party conquers in the strife.'"

"Then, by my word," the Saxon said,
"The riddle is already read;

Seek yonder brake beneath the cliff,—
There lies Red Murdoch, stark and stiff.
Thus Fate hath solved her prophecy,
Then yield to Fate, and not to me ;
To James, at Stirling, let us go,
When, if thou wilt, be still his foe ;
Or, if the king shall not agree
To grant thee grace and favor free,
I plight mine honor, oath and word,
That, to thy native strength restored,
With each advantage shalt thou stand
That aids thee now to guard thy land."

Dark lightning flash'd from Roderick's eye—
"Soars thy presumption, then, so high
Because a wretched kern ye slew,
Homage to name to Roderick Dhu ?
He yields not, he, to man nor Fate !
Thou add'st but fuel to my hate.—
My clansman's blood demands revenge !—
Not yet prepared ?—By Heaven I change
My thought, and hold thy valor light,
As that of some vain carpet knight,
Who ill deserved my courteous care,
And whose best boast is but to wear
A braid of his fair lady's hair."

"I thank thee, Roderick, for the word !
It nerves my heart, it steels my sword ;
For I have sworn this braid to stain
In the best blood that warms thy vein.
Now, truce, farewell ! and ruth, begone !
Yet think not that by thee alone,
Proud chief ! can courtesy be shown.
Though not from copse, or heath, or cairn,
Start at my whistle clansmen stern,
Of this small horn one feeble blast
Would fearful odds against thee cast ;
But fear not—doubt not—which thou wilt,
We try this quarrel hilt to hilt."

Then each, at once, his falchion drew,
Each on the ground his scabbard threw,
Each look'd to sun, and stream, and plain,
As what they ne'er might see again ;
Then, foot, and point, and eye opposed,
In dubious strife they darkly closed.
Ill fared it then with Roderick Dhu,
That on the field his targe he threw,

Whose brazen studs and tough bull-hide
Had death so often dash'd aside ;
For, train'd abroad his arms to wield,
Fitz-James's blade was sword and shield.
He practised every pass and ward,
To thrust, to strike, to feint, to guard ;
While less expert, though stronger far,
The Gael maintain'd unequal war.
Three times in closing strife they stood,
And thrice the Saxon sword drank blood.

Fierce Roderick felt the fatal drain,
And shower'd his blows like wintery rain,
And, firm as rock, or castle roof,
Against the winter shower is proof,
The foe, invulnerable still,
Foil'd his wild rage by steady skill ;
Till, at advantage ta'en, his brand
Forced Roderick's weapon from his hand,
And, backwards borne upon the lea,
Brought the proud chieftain to his knee.

" Now yield thee, or, by Him who made
The world, thy heart's blood dyes my blade !"
" Thy threats, thy mercy, I defy!
Let recreant yield who fears to die."
Like adder darting from his coil,
Like wolf that dashes through the toil,
Like mountain-cat who guards her young,
Full at Fitz-James's throat he sprung,
Received, but reck'd not of a wound,
And lock'd his arms his foeman round.

Now, gallant Saxon, hold thine own !
No maiden's hand is round thee thrown !
That desperate grasp thy frame might feel
Through bars of brass and triple steel !
They tug, they strain ;—down, down they go,
The Gael above, Fitz-James below.
The chieftain's gripe his throat compress'd,
His knee was planted on his breast ;
His clotted locks he backward threw,
Across his brow his hand he drew,
From blood and mist to clear his sight,
Then gleam'd aloft his dagger bright !
But hate and fury ill supplied
The stream of life's exhausted tide,
And all too late the advantage came,
To turn the odds of deadly game ;

For, while the dagger gleam'd on high,
Reel'd soul and sense, reel'd brain and eye ;
Down came the blow ! but in the heath
The erring blade found bloodless sheath.
Unwounded from the dreadful close,
But breathless all, Fitz-James arose. —SCOTT.

LIGHT FOR ALL.

You cannot pay with money
The million sons of toil—
The sailor on the ocean,
The peasant on the soil,
The laborer in the quarry,
The hewer of the coal ;
Your money pays the hand,
But it cannot pay the soul.

The workshop must be crowded
That the palace may be bright ;
If the ploughman did not plough,
Then the poet could not write.
Then let every toil be hallow'd
That man performs for man,
And have its share of honor,
As part of one great plan.

The man who turns the soil
Need not have an earthly mind ;
The digger 'mid the coal
Need not be in spirit blind :
The mind can shed a light
On each worthy labor done,
As lowliest things are bright
In the radiance of the sun.

What cheers the musing student,
The poet, the divine ?
The thought that for his followers
A brighter day will shine.
Let every human laborer
Enjoy the vision bright—
Let the thought that comes from heaven
Be spread like heaven's own light!

Ye men who hold the pen,
Rise like a band inspired,
And, poets, let your lyrics
With hope for man be fired ;

Till the earth becomes a temple,
And every human heart
Shall join in one great service,
Each happy in his part.

—*From the German.*

TO A DYING INFANT.

Sleep, little baby! sleep!
Not in thy cradle bed,
Not on thy mother's breast
Henceforth shall be thy rest,
But with the quiet dead.

Yes, with the quiet dead,
Baby! thy rest shall be—
Oh! many a weary wight,
Weary of life and light,
Would fain lie down with thee!

Flee, little tender nursling!
Flee to thy grassy nest—
There the first flowers shall blow,
The first pure flake of snow
Shall fall upon thy breast.

Peace! peace! the little bosom
Labors with shortening breath;
Peace! peace! that tremulous sigh
Speaks his departure nigh—
Those are the damps of death.

I 've seen thee in thy beauty,
A thing all health and glee;
But never then wert thou
So beautiful as now,
Baby! thou seem'st to me.

Thine upturn'd eyes glazed over
Like harebells wet with dew—
Already veil'd and hid
By the convulsèd lid,
Their pupils darkly blue.

The little mouth half open,
The soft lip quivering,
As if, like summer air,
Ruffling the rose leaves, there
Thy soul were fluttering.

Mount up, immortal essence!
Young spirit! hence—depart!
And is *this* death? dread thing!
If such thy visiting,
How beautiful thou art!

God took thee in His mercy.
A lamb untask'd—untried—
He fought the fight for thee,
He won the victory—
And thou art sanctified.

I look around, and see
The evil ways of men,
And oh, beloved child!
I 'm more than reconciled
To thy departure then.

The little arm that clasp'd me,
The innocent lips that press'd,
Would they have been as pure
Till now, as when of yore
I lull'd thee on my breast?

Now, like a dewdrop shrined
Within a crystal stone,
Thou 'rt safe in heaven, my dove!
Safe with the source of love—
The everlasting One!

And when the hour arrives
From flesh that sets me free,
Thy spirit may await
The first at heaven's gate,
To meet and welcome me.

—D. M. Moir.

MARCO BOZZARIS.

At midnight, in his guarded tent,
The Turk was dreaming of the hour
When Greece, her knee in suppliance bent,
Should tremble at his power;
In dreams, through court and camp, he bore
The trophies of a conqueror;
In dreams his song of triumph heard;
Then wore his monarch's signet ring;
Then press'd that monarch's throne—a king;
As wild his thoughts, and gay of wing,
As Eden's garden bird.

At midnight, in the forest shades,
  Bozzaris ranged his Suliote band,
True as the steel of their tried blades,
  Heroes in heart and hand.
There had the Persian's thousands stood,
There had the glad earth drunk their blood
  On old Platæa's day;
And now there breathed that haunted air
The sons of sires who conquer'd there,
With arm to strike, and soul to dare,
  As quick, as far as they.

An hour pass'd on—the Turk awoke;
  That bright dream was his last.
He woke—to hear his sentries shriek,
"To arms! they come! the Greek! the Greek!"
He woke—to die midst flame and smoke,
And shout, and groan, and sabre stroke,
  And death shots falling thick and fast
As lightnings from the mountain cloud;
And heard, with voice as trumpet loud,
  Bozzaris cheer his band:
"Strike—till the last arm'd foe expires;
Strike—for your altars and your fires;
Strike—for the green graves of your sires;
  God—and your native land!"

They fought—like brave men, long and well;
  They piled that ground with Moslem slain;
They conquer'd—but Bozzaris fell,
  Bleeding at every vein.
His few surviving comrades saw
His smile when rang their proud, "Hurrah!"
  And the red field was won;
Then saw in death his eyelids close
Calmly, as to a night's repose,
  Like flowers at set of sun.

Come to the bridal chamber, Death!
  Come to the mother's, when she feels
For the first time, her firstborn's breath;
  Come when the blessed seals
That close the pestilence are broke,
And crowded cities wail its stroke;
Come in consumption's ghastly form,
The earthquake's shock, the ocean storm;
Come when the heart beats high and warm,
  With banquet song, and dance, and wine;
And thou art terrible—the tear,

The groan, the knell, the pall, the bier;
And all we know, or dream, or fear
Of agony, are thine

But to the hero, when his sword
Has won the battle for the free,
Thy voice sounds like a prophet's word;
And in its hollow tones are heard
The thanks of millions yet to be.
Come, when his task of fame is wrought—
Come, with her laurel-leaf, blood-bought—
Come in her crowning hour—and then
Thy sunken eyes' unearthly light
To him is welcome as the sight
Of sky and stars to prison'd men.
Thy grasp is welcome as the hand
Of brother in a foreign land;
Thy summons welcome as the cry
That told the Indian isles were nigh
To the world-seeking Genoese,
When the land-wind, from woods of palm,
And orange groves, and fields of balm,
Blew o'er the Haytian seas.

Bozzaris! with the storied brave
Greece nurtured in her glory's time,
Rest thee—there is no prouder grave,
Even in her own proud clime.
She wore no funeral weeds for thee,
Nor bade the dark hearse wave its plume
Like torn branch from death's leafless tree
In sorrow's pomp and pageantry,
The heartless luxury of the tomb.
But she remembers thee as one
Long loved, and for a season gone;
For thee her poet's lyre is wreathed,
Her marble wrought, her music breathed;
For thee she rings the birthday bells;
Of thee her babe's first lisping tells;
For thine her evening prayer is said
At palace couch and cottage bed;
Her soldier, closing with the foe,
Gives for thy sake a deadlier blow;
His plighted maiden, when she fears
For him, the joy of her young years,
Thinks of thy fate, and checks her tears:
And she, the mother of thy boys,
Though in her eye and faded cheek

Is read the grief she will not speak,
The memory of her buried joys,
And even she who gave thee birth,
Will, by their pilgrim-circled hearth,
Talk of thy doom without a sigh:
For thou art Freedom's now, and Fame's;
One of the few, the immortal names
That were not born to die. —HALLECK.

THE MEETING OF THE WATERS.

THERE is not in the wide world a valley so sweet
As that vale in whose bosom the bright waters meet;
Oh! the last rays of feeling and life must depart,
Ere the bloom of that valley shall fade from my heart.

Yet it was not that nature had shed o'er the scene
Her purest of crystal and brightest of green;
'Twas not her soft magic of streamlet or hill,
Oh! no—it was something more exquisite still.

'Twas that friends, the beloved of my bosom, were near,
Who made every dear scene of enchantment more dear,
And who felt how the best charms of nature improve
When we see them reflected from looks that we love.
—MOORE.

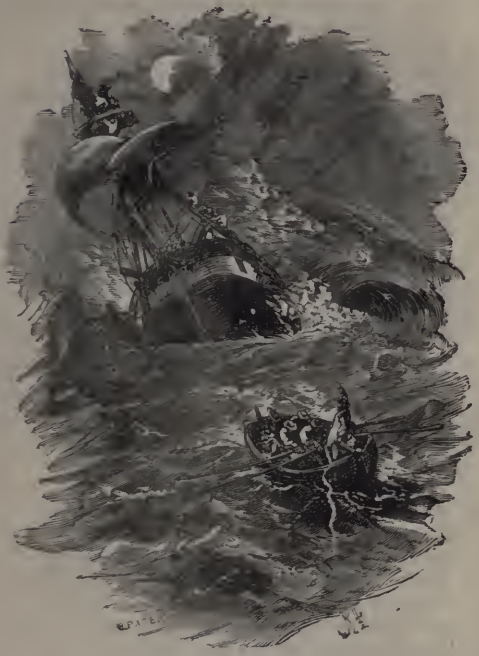
OFT, IN THE STILLY NIGHT.

OFT, in the stilly night,
Ere slumber's chain has bound me,
Fond memory brings the light
Of other days around me;
The smiles, the tears,
Of boyhood's years,
The words of love then spoken;
The eyes that shone,
Now dimm'd and gone,
The cheerful hearts now broken!
Thus, in the stilly night,
Ere slumber's chain hath bound me,
Sad memory brings the light
Of other days around me.

When I remember all
The friends, so link'd together,
I've seen around me fall,
Like leaves in wintry weather;

I feel like one
Who treads alone
Some banquet-hall deserted,
Whose lights are fled,
Whose garlands dead,
And all but he departed!
Thus, in the stilly night,
Ere slumber's chain has bound me,
Sad memory brings the light
Of other days around me.

—MOORE.



A SHIP SINKING.

HER giant form,
O'er wrathful surge, through blackening storm,
Majestically calm would go,
'Mid the deep darkness, white as snow!

But gently now the small waves glide,
Like playful lambs o'er a mountain side.
So stately her bearing, so proud her array,
The main she will traverse for ever and aye.
Many ports will exult at the gleam of her mast!—
Hush! hush! thou vain dreamer! this hour is her last.
Five hundred souls in one instant of dread
Are hurried over the deck;
And fast the miserable ship
Becomes a lifeless wreck.
Her keel hath struck on a hidden rock,
Her planks are torn asunder,
And down came her mast with a reeling shock,
And a hideous crash like thunder.
Her sails are draggled in the brine
That gladden'd late the skies,
And her pennant that kiss'd the fair moonshine,
Down many a fathom lies.
Her beauteous sides, whose rainbow hues
Gleam'd softly from below,
And flung a warm and sunny flash
O'er the wreaths of murmuring snow,
To the coral rocks are hurrying down
To sleep amid colors as bright as their own.
Oh! many a dream was in the ship
An hour before her death;
And sights of home with sighs disturb'd
The sleepers' long-drawn breath.
Instead of the murmur of the sea,
The sailor heard the humming-tree
Alive through all its leaves,
The hum of the spreading sycamore,
That grows before his cottage door,
And the swallows' song in the eaves.
His arms enclosed a blooming boy,
Who listen'd, with tears of sorrow and joy,
To the dangers his father had pass'd:
And his wife—by turns she wept and smiled,
As she look'd on the father of her child
Return'd to her heart at last.
—He wakes at the vessel's sudden roll,
And the rush of waters is in his soul.
Now is the ocean's bosom bare,
Unbroken as the floating air;
The ship hath melted quite away,
Like a struggling dream at break of day.
No image meets my wandering eye
But the new-risen sun and the sunny sky.

Though the night-shades are gone, yet a vapor dull
Bedims the wave so beautiful;
While a low and melancholy moan
Mourns for the glory that hath flown.

—JOHN WILSON.

HOW'S MY BOY?

"Ho, sailor of the sea!
How's my boy—my boy?"
"What's your boy's name, good wife,
And in what good ship sail'd he?"

"My boy John—
He that went to sea—
What care I for the ship, sailor?
My boy's my boy to me.
You come back from sea,
And not know my John?
I might as well have ask'd some landsman
Yonder down in the town.
There's not an ass in all the parish
But he knows my John.

"How's my boy—my boy?
And unless you let me know
I'll swear you are no sailor,
Blue jacket or no,
Brass buttons or no, sailor,
Anchor and crown or no!
Sure his ship was the *Jolly Briton!*"
"Speak low, woman, speak low!"
"And why should I speak low, sailor,
About my own boy John?
If I were loud as I am proud
I'd sing him o'er the town!
Why should I speak low, sailor?"
"That good ship went down."

"How's my boy—my boy?
What care I for the ship, sailor?
I never was aboard her.
Be she afloat or be she aground,
Sinking or swimming, I'll be bound
Her owners can afford her!
I say, how's my John?"
"Every man aboard went down,
Every man aboard her."
"How's my boy—my boy?
What care I for the men, sailor?

I'm not their mother.
How 's my boy—my boy ?
Tell me of him and no other !
How's my boy—my boy ?" —DOBELL.

THE BRIDAL OF ANDALLA.

"RISE up, rise up, Xarifa, lay the golden cushion down ;
Rise up, come to the window, and gaze with all the town.
From gay guitar and violin the silver notes are flowing,
And the lovely lute doth speak between the trumpets, lordly blowing ;
And banners bright from lattice light are waving everywhere,
And the tall, tall plume of our cousin's bridegroom floats proudly in the air.
Rise up, rise up, Xarifa, lay the golden cushion down ;
Rise up, come to the window, and gaze with all the town.

"Arise, arise, Xarifa ; I see Andalla's face ;
He bends him to the people, with a calm and princely grace ;
Though all the land of Xeres, and banks of Guadalquiver,
Rode forth bridegroom so brave as he, so brave and lovely, never.
Yon tall plume waving o'er his brow, of azure mix'd with white,
I guess 'twas wreathed by Zara, whom he will wed to-night.
Rise up, rise up, Xarifa, lay the golden cushion down ;
Rise up, come to the window, and gaze with all the town.

"What aileth thee, Xarifa ? what makes thine eyes look down ?
Why stay ye from the window far, nor gaze with all the town ?
I've heard you say on many a day, and sure you said the truth,
Andalla rides without a peer among all Granada's youth ;
Without a peer he rideth, and yon milk-white horse doth go
Beneath his stately master, with a stately step and slow.
Then rise, oh rise, Xarifa, lay the golden cushion down ;
Unseen here, through the lattice you may gaze with all the town."

The Zegri lady rose not, nor laid her cushion down ;
Nor came she to the window to gaze with all the town ;
But though her eyes dwelt on her knee, in vain her fingers strove,
And though her needle press'd the silk, no flower Xarifa wove.
One bonny rosebud she had traced before the noise drew nigh ;
That bonny bud a tear effaced, slow dropping from her eye.
"No, no," she sighs, "bid me not rise, nor lay my cushion down,
To gaze upon Andalla with all the gazing town."

"Why rise ye not, Xarifa, nor lay your cushion down ?
Why gaze ye not, Xarifa, with all the gazing town ?
Hear, hear that trumpet how it swells ! and how the people cry !
He stops at Zara's palace-gate. Why sit ye still ? oh, why ?"

"At Zara's gate stops Zara's mate; in him shall I discover
The dark-eyed youth pledged me his truth with tears, and was my lover.
I will not rise with weary eyes, nor lay my cushion down,
To gaze on false Andalla with all the gazing town."

—LOCKHART.

RESIGNATION.

THERE is no flock, however watch'd and tended,
But one dead lamb is there!
There is no fireside, howsoe'er defended,
But has one vacant chair!

The air is full of farewells to the dying,
And mournings for the dead;
The heart of Rachel, for her children crying,
Will not be comforted.

Let us be patient. These severe afflictions
Not from the ground arise,

But oftentimes celestial benedictions
Assume this dark disguise.

We see but dimly through the mists and vapors
Amid these earthly damps:
What seem to us but sad funereal tapers
May be heaven's distant lamps.

There is no death! What seems so is transition.
This life of mortal breath
Is but a suburb of the life Elysian,
Whose portal we call death.

She is not dead, the child of our affection,
But gone unto that school
Where she no longer needs our poor protection,
And Christ himself doth rule.

In that great cloister's stillness and seclusion,
By guardian angels led,
Safe from temptation, safe from sin's pollution,
She lives, whom we call dead.

Day after day, we think what she is doing
In those bright realms of air;
Year after year, her tender steps pursuing,
Behold her grown more fair.

Thus do we walk with her, and keep unbroken
The bond which nature gives,
Thinking that our remembrance, though unspoken,
May reach her where she lives.

Not as a child shall we again behold her;
For when with rapture wild,
In our embraces we again enfold her,
She will not be a child;

But a fair maiden in her Father's mansion,
Clothed with a celestial grace;
And beautiful with all the soul's expansion
Shall we behold her face.

And though at times impetuous with emotion,
And anguish long suppress'd,
The swelling heart heaves moaning like the ocean
That cannot be at rest,

We will be patient, and assuage the feeling
We may not wholly stay:
By silence sanctifying, not concealing,
The grief that must have way. —LONGFELLOW

THE BROOK.

I come from haunts of coot and hern,
I make a sudden sally,
And sparkle out among the fern
To bicker down a valley.

By thirty hills I hurry down,
Or slip between the ridges;
By twenty thorps, a little town,
And half a hundred bridges.

I chatter over stony ways,
In little sharps and trebles,—
I bubble into eddying bays—
I babble on the pebbles.

With many a curve my banks I fret,
By many a field and fallow,
And many a fairy foreland set
With willow-weed and mallow.

I chatter, chatter, as I flow
To join the brimming river;
For men may come, and men may go,
But I go on for ever.

I wind about, and in and out,
With here a blossom sailing,
And here and there a lusty trout,
And here and there a grayling;

And here and there a foamy flake
Upon me, as I travel,
With many a silvery waterbreak
Above the golden gravel,

And draw them all along, and flow
To join the brimming river;
For men may come, and men may go,
But I go on for ever.

I steal by lawns and grassy plots,
I slide by hazel covers;
I move the sweet forget-me-nots
That grow for happy lovers.

I slip, I slide, I gloom, I glance,
Among my skimming swallows:
I make the netted sunbeam dance
Against my sandy shallows.

I murmur under moon and stars
In brambly wildernesses;

I linger by my shingly bars ;
I loiter round my cresses ;

And out again I curve and flow
To join the brimming river ;
For men may come, and men may go,
But I go on for ever. —TENNYSON.

THE ECHOES.

THE splendor falls on castle walls
And snowy summits old in story ;
The long light shakes across the lakes
And the wild cataract leaps in glory :
Blow, bugle, blow, set the wild echoes flying,
Blow, bugle, answer echoes, dying, dying, dying.

Oh, hark ! oh, hear ! how thin and clear
And thinner, clearer, further going !
Oh ! sweet and far, from cliff and scar
The horns of Elf-land faintly blowing.
Blow, let us hear the purple glens replying,
Blow, bugle, answer echoes, dying, dying, dying.

O love, they die on yon rich sky,
They faint on hill, on field, on river ;
Our echoes roll from soul to soul,
And grow for ever and for ever.
Blow, bugle, blow, set the wild echoes flying,
And answer, echoes answer, dying, dying, dying.

—TENNYSON.

THE GRAVE.

I STOOD within the grave's o'ershadowing vault ;
Gloomy and damp, it stretch'd its vast domain ;
Shades were its boundary ; for my strain'd eye sought
For other limits to its width in vain.

Faint from the entrance came a daylight ray,
And distant sound of living men and things ;
This in the encountering darkness pass'd away,
That took the tone in which a mourner sings.

I lit a torch at a sepulchral lamp,
Which shot a thread of light amid the gloom ;
And feebly burning 'gainst the rolling damp,
I bore it through the regions of the tomb.

Around me stretch'd the slumbers of the dead,
Whereof the silence ached upon mine ear ;
More and more noiseless did I note my tread,
And yet its echoes chill'd my heart with fear.

The former men of every age and place,
From all their wanderings, gather'd round me lay ;
The dust of wither'd empires did I trace,
And stood 'mid generations pass'd away.

I saw whole cities, that in flood or fire,
Or famine, or the plague, gave up their breath ;
Whole armies, whom a day beheld expire,
Swept by ten thousands to the arms of death.

I saw the old world's white and wave-swept bones,
A giant heap of creatures that had been ;
Far and confused the broken skeletons
Lay strewn beyond mine eyes' remotest ken.

Death's various shrines—the urn, the stone, the lamp—
Were scatter'd round confused amid the dead ;
Symbols and types were mouldering in the damp,
Their shapes were wanting and their meaning fled.

Unspoken tongues, perchance in praise or woe,
Were chronicled on tablets time had swept ;
And deep were half their letters hid below
The thick, small dust of those they once had wept.

No hand was here to wipe the dust away ;
No reader of the writing traced beneath ;
No spirit sitting by its form of clay ;
No sigh nor sound from all the heaps of death.

One place alone had ceased to hold its prey ;
A form had press'd it and was there no more ;
The garments of the grave beside it lay,
Where once they wrapt Him on the rocky floor.

He only with returning footsteps broke
The eternal calm with which the tomb was bound ;
Among the sleeping dead alone He woke
And bless'd with outstretch'd hands the host around.

Well is it that such blessing hovers here,
To soothe each sad survivor of the throng
Who haunt the portals of the solemn sphere,
And pour their woe the loaded air along.

They to the verge have follow'd what they love,
And on the insuperable threshold stand ;
With cherish'd names its speechless calm reprove,
And stretch in the abyss their ungrasp'd hand.

But vainly there they seek their soul's relief,
And of the obdurate grave its prey implore ;
Till death himself shall medicine their grief,
Closing their eyes by those they met before.

All that have died, the earth's whole race, repose
Where death collects his treasures, heap on heap;
O'er each one's busy day the night shades close;
Its actors, sufferers, schools, kings, armies—sleep.
—Mrs. Clive.

THE DYING CHRISTIAN TO HIS SOUL.

Vital spark of heavenly flame!
Quit, oh quit this mortal frame:
Trembling, hoping, lingering, flying,
Oh the pain, the bliss of dying!
Cease fond nature, cease thy strife,
And let me languish into life.

Hark! they whisper; angels say,
"Sister spirit, come away."
What is this absorbs me quite,
Steals my senses, shuts my sight,
Drowns my spirits, draws my breath?
Tell me, my soul, can this be death?

The world recedes; it disappears!
Heaven opens on my eyes! my ears
With sounds seraphic ring:
Lend, lend your wings! I mount! I fly!
O grave! where is thy victory?
O death! where is thy sting? —Pope.

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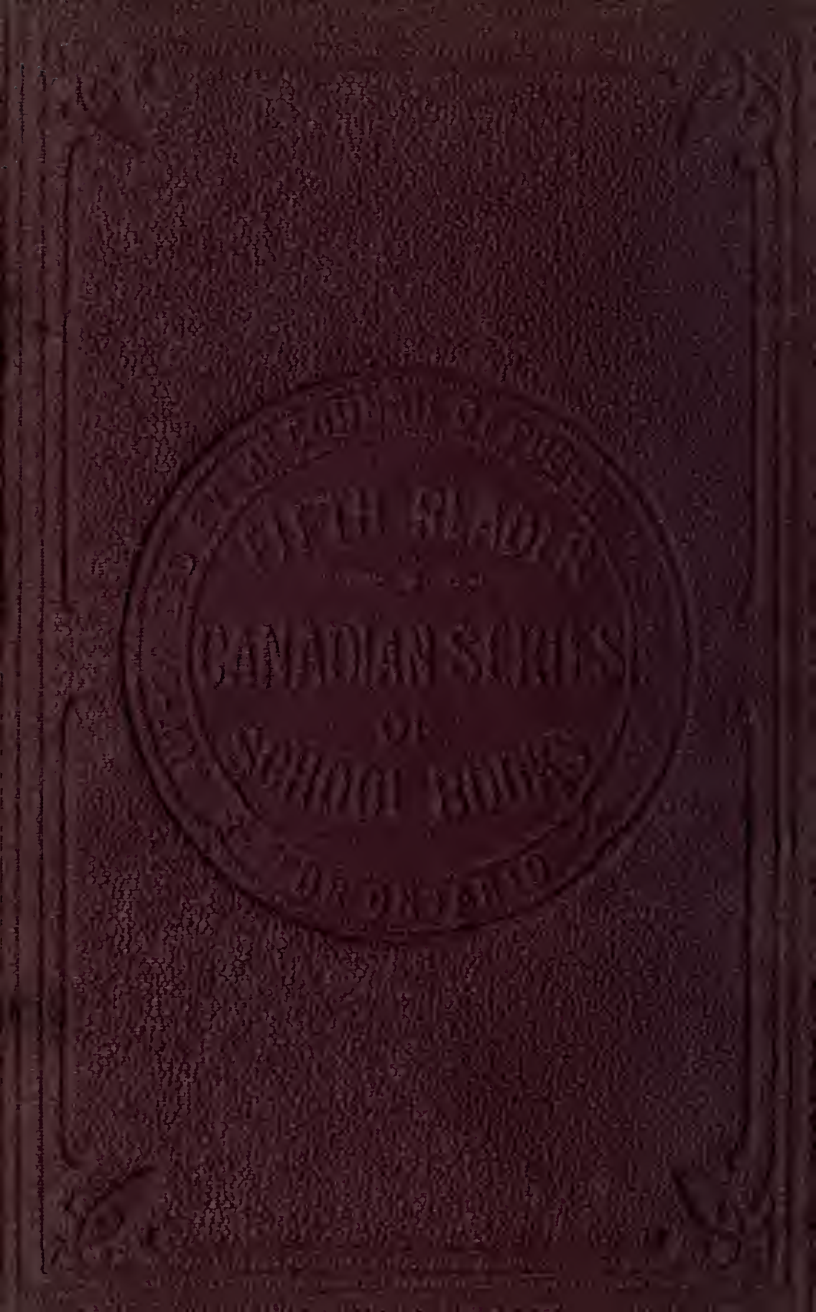
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